



TAX REFORMS COMMITTEE



FINAL REPORT PART II

January, 1993

Government of India, Ministry of Finance, Department of Revenue.

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INTRODUCTION

1.1 As indicated in the Final Report - Part I of the Committee, this second part deals mainly with the restructuring and rationalising of import duties. In the Interim Report, we had dealt with this subject in some detail and had discussed the rationale for the reform and the major lines on which the restructuring should be carried out. After suggesting the range and kind of import duty reduction that should be carried out in the Budget for the year 1992-93, we had recommended for consideration a duty rate structure for four broad categories of commodities to be brought into existence by an intermediate year, 1995-96. We had then suggested that the entire reform programme should be completed by 1998-99. By that year, while the general pattern or structure of rates should be the same as recommended for 1995-96, we had argued that the average nominal rate of import weighted tariff rate [excluding countervailing duty (CVD)] should be brought down to around 25 per cent and the maximum rate, to be applied to non-essential consumer goods, should be 50 per cent.

1.2 The recommendations regarding changes in the import duty rates contained in the Interim Report related only to broad groups of commodities. Since more detailed studies of particular industries were called for before making recommendations in respect of specific groups of industries, such as iron and steel, non-ferrous metals, chemicals, plastics, machinery and electronics, we had indicated such recommendations could be made in the Final Report. We had also indicated that the Final Report would deal with the major anomalies in the import tariff structure which had to be removed at the time of re-structuring. Accordingly, the present Report gives the Committee's final recommendations on the changes to be effected in the duty structure relating to specific groups of industries and the time

period within which the changes should be brought about.

1.3 The Report deals also with the restructuring of excise duties and review of exemption notifications in the import tariff.

1.4 The Report is divided into 12 chapters. Chapter 2 outlines our approach to the task of import duty reduction and the general methodology we have employed to arrive at our conclusions. This chapter also draws attention to the problem of "dumping" and suggests a procedure that would make the imposition of anti-dumping duty, wherever necessary provisional anti-dumping duty, without much delay. Chapters 3 to 9 briefly discuss the situation of the domestic industries producing the groups of commodities considered in relation to international prices, take into consideration the relevant factors and work out the rates of import duty that would be appropriate to each (category of) product at the end of the period of reform.

1.5 In Chapter 10, a brief review of the exemption notifications in the import tariff and suggestions for withdrawing the existing exemption from CVD have been made.

1.6 Chapter 11 indicates the restructured central excise duty regime to be introduced in 3 to 4 years' time while Chapter 12 gives the concluding remarks.

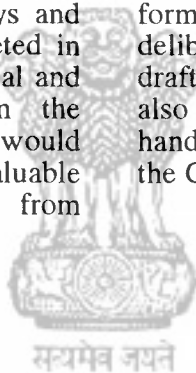
1.7 We would like to express our gratitude to all industry associations, Chambers of Commerce and Industry and individual industrialists who appeared before us to give evidence. The interaction with them has been of immense benefit to us. We are also indebted to several concerned Ministries of the Government of India as well as to particular industrialists for giving us industry-specific and product-specific

information. As before, the Central Board of Excise and Customs and officers of the Customs and Central excise department have given us ample help in many ways and we are indeed thankful to them.

1.8 We have had the benefit of excellent staff assistance. We were fortunate to obtain the services of Prof. R.G.Nambiar of the Sardar Patel Institute of Economic Research, Ahmedabad who worked as Senior Consultant with us. We were equally fortunate to have on deputation to the Committee Shri P.K. Jain, Deputy Collector (Central Excise), Bombay-III Collectorate. We were happy to have the services of Shri A.R. Srinivasan who worked as a consultant with us. We have greatly benefited from the work of Prof.R.G.Nambiar, Shri P. K. Jain and Shri A.R. Srinivasan. The staff of the National Institute of Public Finance & Policy (NIPFP) have helped us in many ways and the work could not have been completed in such a short time without the intellectual and infrastructural support derived from the Institute. On the professional side, we would like to acknowledge in particular the valuable assistance we have received from

Dr.Arindam Das Gupta, Fellow, Ms. Hashim M. Saleem, Research Associate and Dr. V.S. Renganathan, Economist, at NIPFP. Competent secretarial support was provided by Shri S.B. Mann, Shri B.K. Shrivastva, Shri Digvijay Mishra, Shri M.C. Aggarwala, Shri A.K. Baronia, Shri S.C. Tandon, Shri Satish Kamath and Navin Kumar Singh. Shri N. Natarajan and Shri H.B. Pandey helped in the production of the Report. We would also like to acknowledge the considerable help that we have received from the administrative staff of NIPFP.

1.9 The Committee would like to place on record its high appreciation of the assistance it received from Shri Gautam Ray, Secretary and Shri Arbind Modi, Additional Secretary. Both of them with the depth of their knowledge, practical administrative experience and background of tax policy formulation made valuable contribution to the deliberations of the Committee and in drafting the Report. Shri Gautam Ray has also done an exceedingly good job in handling the various administrative aspects of the Committee's work.



BASIC CONSIDERATIONS RELATING TO IMPORT DUTY REDUCTION

The Objectives

2.1 In our Interim Report, we had given a fairly detailed description of the very complex and economically irrational import tariff system prevalent in India. The very high or high rates applicable to most commodities, the multiplicity of statutory rates, the wide spread of rates and the continued issue of a large number of exemption or concessional rate notifications not only made the administration of the system extremely complicated, but led to unintended and undesirable effects on the allocation of resources in the economy. All of this was documented in the Interim Report (Paragraphs 4.28 to 4.30 and Paragraphs 8.2 to 8.5). Further, there is general agreement now that the import tariff system should be drastically simplified, the levels and spread of the rates of duty must be reduced significantly, and as early as possible with the re-structuring of the duties, most of the notifications must be eliminated. We will, in this Chapter, discuss some broad aspects that should weigh in shaping the Tariff structure in the next three or four years. The questions that need to be answered are:

- a. What should be the guiding principles for initiating and bringing about duty reductions?
- b. What should be the structure of rates at the end of the reform period and what economic principles should determine this structure? and,
- c. What should be the time period by which the reform should be completed?

2.2 In what follows, we attempt to provide answers to these questions. Before we take up these and related matters, we

would like to urge that, in accordance with our recommendation in the Interim Report (Para 8.16), basic and auxiliary duties should be combined into one protective duty for a given commodity. It could have been argued earlier that the arrangement for preferential rates of duty with some developing countries stood in the way of such a merger. However, according to the decision already taken by the Government, the preferential rates of duty under the GATT Protocol and the Tripartite Agreement will cease to be applicable after March, 1993. In the case of the remaining preferential trading arrangements, the rate applicable should be the single rate emerging on combining the basic and auxiliary duties.

Degree of Protection in 1992-93 as Compared to That in 1986-87

2.3 In the Interim Report (Para 8.5), we had pointed out that between 1980-81 and 1989-90, the trade-weighted real effective exchange rate of the rupee depreciated by about 28 per cent and that the import-weighted average rate of import duty increased from 38 per cent to 87 per cent during the same period. This meant that the level of protection, quite clearly the nominal rate of protection, enjoyed by Indian industries went up substantially. The increase in the same average duty for manufactured products during this period was from 38 per cent to 98 per cent. "Thus, compared to the average level of nominal protection enjoyed by Indian manufacturing in 1980-81 (which was already high), the average level of nominal protection of Indian manufacturing in 1989-90 was higher by about 88 percentage points" (Interim Report, p.95).¹

2.4 We note that the real effective exchange rate depreciation in the 7-year period between 1985-86 and 1992-93 has

been much greater than during the earlier period considered. This means that Indian industry in general is getting, as of 1992-93, a much higher nominal rate of protection than in the early 1980's. We have, for our purposes, gone only as far back as 1985-86. As Table 2.1 shows, the import-weighted real exchange rate appreciation of the basket of four major currencies has been of the order of 135 per cent between 1985-86 and 1992-93. In other words, the real exchange rate of the rupee has depreciated by 57.45 per cent during the period. Hence, the nominal rate of protection, other things remaining the same, would have increased to an undesirably large extent. Even if we take 1986-87 as the base, the appreciation is seen to be to the extent of 105 per cent. However, duty reductions and fall in international prices in respect of particular commodities, increases in input costs higher than the general rate of domestic inflation and any increases in the duty rates on imported inputs of the concerned commodities, would have partially neutralised the increase in the nominal rate of protection. Nevertheless, the increase in the nominal rate of protection due to the depreciation in the external value of the rupee has been so great that the net increase in the nominal rate of protection is bound to be substantial in most cases. And wherever the proportion of the cost of imported inputs to total costs is small, the effective rate of protection would also have risen substantially.

2.5 Table 2.2 gives the nominal tariff rates applied to 50 imported items in six different groups of commodities in the years 1986-87² and 1992-93. It will be seen that there have been substantial percentage point reductions in rates of duty between the two years in the case of a number of items. However, as the figures under the heading (4) in the table show, because of the depreciation in the external value of the rupee, the nominal rate of protection given, other things remaining the same, has increased in all cases. Thus, for example, in the case of item 3, DMT, the degree of protection has increased by 48 per cent in 1992-93 as

compared to 1986-87, if only the depreciation in the external value of the rupee and the change in the import duty rate are taken into account. Thus although the duty has been reduced from 190 per cent to 110 per cent, it is as though the duty is now 330.5 per cent with unchanged exchange rate.³ Hence even a duty reduction by 50 percentage points would still leave the commodity well "protected", since the international price of the commodity has not fallen in relation to the price level in 1986-87.⁴ If duty reductions are applied to most commodities, then the effective rate of protection will also be maintained at the higher level.

2.6 The tables and the inferences drawn from them are merely intended to demonstrate that an across the board duty reduction by a fairly substantial margin would not in general hurt Indian industry. This is more true now than when the Interim Report was written and submitted (December, 1991). Having said this, it must be pointed out that in working out the desirable and feasible extent of import duty reduction in respect of different commodities, we have taken into account the international prices in rupees and have worked out the cif prices or taken the cif prices as furnished to us by the industry. Wherever possible, we have obtained domestic costs and in some cases studied the extent to which these costs are affected by high import duties on imported inputs. We have then worked out "the implicit tariff rate" which would equate the international price and the estimated, or in some cases, prevailing domestic prices.

2.7 In arriving at the extent of reduction in the import duty rates, we have taken into account as many relevant factors as possible. As far as domestic industries are concerned, we have tried to ensure that they would not be hurt and would be given adequate time for adjustment. For this purpose we have kept in mind the inherent disadvantages from which varying types of Indian industrial units suffer because of the general inefficiencies in the economy such as higher interest costs, power cuts, lack of

efficient infrastructure and cascading types of State and local taxes. All these disadvantages cannot be precisely quantified in monetary terms. Nevertheless, we have attempted to form a broad idea of the extent of cost disadvantage that could be said to arise at the present time. Of course, as the reform process proceeds, these disadvantages would be gradually reduced.

The Structure of Duties

2.8 Many economists would argue that it would be best to have only one (ad valorem) rate of import duty. Apart from achieving administrative ease, this would least hinder the allocation of resources for domestic production by the market forces. In addition to the single rate, a surcharge or additional duty could be imposed on the products of a new or infant industry, which might not be able to withstand competition from established foreign producers, until it achieves scale economies and establishes itself firmly with a proper marketing framework, etc. Such a surcharge or additional duty would have to be subject to a "sunset" provision whereby the extra protection will be removed within a period of, say, 5-7 years.

2.9 The prescription of a single import duty rate is given on the premise that national economic policy need not really concern itself with the pattern of industrialisation and need not, or should not, discriminate as between final products, capital goods, raw materials and intermediates. But tariff policy should have some relation to the stage of development and in a developing country, while the market should have a large role to play, the structure of import duties should be used to achieve the longer term goals of industrialisation and to further the strategy of dealing with the world market. We note that except for one developing country, namely, Chile, at least a few import duty rates prevail in all other developing countries that we have looked at.

2.10 We take as datum the fact that petroleum products and agricultural products are subject to quantitative restrictions and that the imports of non-essential goods are banned except when they come as part of baggage. We shall have to deal with these three classes of goods separately. As for the others, as indicated in the Interim Report (Para 8.22), the basic duty rate structure suggested in the Long Term Fiscal Policy Document (1985) could be taken as providing the guiding principles. Accordingly, we are recommending that essential goods such as inputs for fertiliser and newsprint should be subject to very low rate of 5 per cent, a low rate of 10 to 15 per cent should apply to basic raw materials such as metals, the next higher rung of rates to capital goods and parts and slightly higher rates to chemical intermediates. Final products will attract the highest rate of duty of 30 per cent.

2.11 In the Interim Report we had envisaged that the task of re-structuring the import duties could be completed by the year 1998-99, when the average rate of duty could be brought down to around 25 per cent (Para 8.47). We had not then anticipated the shift to partial convertibility and the consequent further depreciation in the value of the rupee and the corresponding increase in the cost of most imports. We had, therefore, envisaged a somewhat longer period within which restructuring of import duties should be achieved than what seems called for now. We now feel that the basic reform of the tariff structure could be completed by 1996-97 or latest by 1997-98. By that time the import weighted average rate of duties should have come down to around 25 per cent (excluding any zero rated commodities, but including consumer goods).

2.12 While we have ruled out a single duty rate regime, we are clearly in favour of having only a very limited number of rates and of abolishing the zero rate in course of time. A large number of rates not only create administrative problems, but leads to non-transparency in the degrees of effective protection given to different products as well

as to distortions in the allocation of resources. By keeping only a limited number of rates, we shall render administration of the tariff a fairly easy task, and by limiting the spread, we shall minimise distortions. The structure of duties will be such as to encourage value addition activities and to ensure that products at later stages are not subjected to negative effective rate of protection. In the Chapters that follow, which deal with different groups of products, we are applying the above-mentioned principles to determine the appropriate rates. We are recommending that by 1997 or 1998 March end, the structure of ad valorem rates of duties in place should be: 5, 10, 15, 20, 25 and 30. In addition, when non-essential consumer goods are allowed to be imported, there should be another "slot" for them, namely, 50 per cent.

2.13 In the Interim Report, we had suggested that all goods should be subject at least to a minimum tariff. Even if the goods are essential and/or their imports are restricted, there is no reason why the domestic producers of those goods should not be entitled to any protection. We suggest that the minimum of rate of 5 per cent should be applied to those that are now exempt. It may not be possible, for some reasons, to apply immediately this rate to fertiliser and ammonia and phosphoric acid used in the manufacture of fertilizer. Even these commodities should be made subject to duty at the earliest possible opportunity.

2.14 We may, at this stage, point out the necessary consequences of exempting the capital goods and inputs for the fertiliser industry from all import duty. This means that while substantial protection is being extended to most industries, industries producing machinery, parts of machinery and inputs for the fertiliser industry will receive no protection at all. A necessary consequence of this is that domestic production of these goods would be discouraged; and a probable long-term consequence will be that we shall become largely dependent on imports in respect of machinery and inputs for the fertiliser

industry. These are not desirable consequences.

Anti-dumping

2.15 A number of complaints have been received in recent years from the domestic producers alleging the adoption of the unfair trade practice of dumping by some foreign exporters. In a low tariff regime that we are recommending, it is essential that provision is made to see that the domestic industry does not fall a victim to such unfair practices.

2.16 The Indian law relating to anti-dumping has adopted GATT guidelines and would appear to be an adequately powerful weapon. The effectiveness of this weapon, however, is considerably lessened because of the lengthy procedure involved in initiating the proceedings and completing the investigation to arrive at the final findings. No doubt, the Customs Tariff (Identification, Assessment and Collection of Duty or Additional Duty on Dumped Articles and for Determination of Injury) Rules, 1985 provide a time-limit of one year from the date of initiating of an investigation (or within an extended period in exceptional cases) to give the final findings and a time-limit of six months of the publication of final findings for imposition of duty. We are of the view that these time-limits are too long and could be curtailed, though we do appreciate that by their very nature, such investigations are time-consuming. We would suggest that the time-limit for giving the final findings could be reduced to six months and the time-limit for imposition of duty to three months.

2.17 The Rules provide for the imposition of provisional duty at any time, after a preliminary finding that there is dumping in respect of articles which are the subject matter of investigation. This provision should be invariably made use of where the final findings are not likely to be arrived at within a month or two of the preliminary finding.

2.18 We also feel that the machinery for dealing with anti-dumping matters needs to be strengthened.

Levy of Surcharge

2.19 Where international prices dip steeply (not due to dumping), say, by as much as 25 per cent or so, a regulatory duty may be imposed for a specified period of time so that the domestic industry is given an opportunity to adjust itself. The regulatory duty may be expressed in specific terms and may be withdrawn, once the prices reach the "normal" level. The period in any case should not be more than a year; in other words, if the lower level has come to prevail, Indian industry should adjust itself to it, and the consumer should be allowed to benefit from it.

2.20 Additional or special protection can be given for a specified period to a new industry to be established or a new product to be launched through a new technology in strategic areas. Such protection could be through an additional duty, say, not exceeding 25 per cent of the basic duty to be in force for a period of 5 to 7 years, as may be determined.

Advance Licensing for Exporters

2.21 Because of the inherent disadvantages suffered by Indian industry due to the inefficiencies present in the economy, including those attributable to irrationalities in the tax system, it is not possible to reduce import duty rates to very low levels as in some other developing countries. Hence, the system of advance licensing for exporters should continue. Furthermore, since there is no remission of duty on capital goods for exports, it is necessary that the import duty on capital goods should be brought down according to our recommendations.

2.22 As the structural reform process continues, the inefficiencies and cost disadvantages would gradually diminish. We would urge that Government should take steps to remove infrastructural deficiencies quickly. Equally important is the improvement in the movement of goods which are now subject to delays caused by some of the policies of the State Governments and local authorities. It is also extremely important that State and local indirect taxes must be reformed so that they do not add to the cost of production, thereby hindering export effort and preventing the lowering of import tariff.

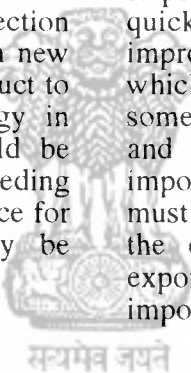


TABLE 2.1

**Effective Exchange Rate Depreciation of the Rupee by 1992-93
in Terms of Appreciation of a Basket of Four Major Foreign Currencies**

Base year	UK Pound	US Dollar	Deutsche (German) Mark	Japanese Yen	4-Country REER depreciation		
					Imports	Weighted by Exports	Trade
A. Real Exchange Rate Depreciation							
1985-86	2.77	1.63	3.03	2.64	2.35	2.23	2.29
1986-87	2.36	1.72	2.35	1.99	2.05	1.98	2.02
1987-88	2.31	1.80	2.12	1.95	2.01	1.96	1.99
1988-89	2.01	1.67	2.00	1.71	1.82	1.78	1.80
1989-90	1.94	1.49	1.95	1.66	1.72	1.67	1.70
1990-91	1.75	1.53	1.73	1.86	1.69	1.68	1.69
1991-92	1.70	1.45	1.73	1.60	1.60	1.57	1.58
1992-93	1.00	1.00	1.00	1.00	1.00	1.00	1.00
B. Nominal Exchange Rate Depreciation							
1985-86	3.63	2.47	4.98	4.93	3.69	3.53	3.62
1986-87	3.07	2.45	3.59	3.26	2.99	2.91	2.96
1987-88	2.82	2.38	2.87	2.80	2.67	2.63	2.65
1988-89	2.42	2.17	2.62	2.32	2.35	2.32	2.34
1989-90	2.27	1.86	2.41	2.12	2.12	2.07	2.10
1990-91	1.92	1.76	1.94	2.15	1.92	1.91	1.91
1991-92	1.70	1.46	1.73	1.61	1.60	1.58	1.59
1992-93	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Note: 1 The following examples illustrate how the table is to be read:

- Ex.1. Entry of 2.35 in the second row fourth column of Part A:
"It takes 2.35 times as many rupees in 1992-93 to obtain one DM as it took in 1986-87 after correcting for inflation in India and Germany".
- Ex.2. Entry of 1.91 in the sixth row seventh column of Part B:
"It takes, on average, 1.91 times as many rupees in 1992-93 to obtain one foreign currency unit as it took in 1990-91".

Note: 2 **Computation of Real Effective Exchange Rate Depreciation : Methodology**

The Nominal Exchange Rate (NER) against any foreign currency is the number of Indian rupees needed to obtain a unit of that foreign currency. In a dual exchange rate system, as prevails in India at present, more than one nominal exchange rate may co-exist. In computations made, market exchange rates have been used as these are the rates relevant to the majority of imports, the focus of this exercise.

The *Real Exchange Rate* (RER) against any foreign currency is the number of Indian rupees needed to obtain a unit of that foreign currency after correcting for erosion in the value of both currencies due to inflation. If I_i and I_f are, respectively, the (cumulative) Indian and foreign inflation relative to a chosen base year, then $RER = NER \times (1+I_f) / (1+I_i)$. The price indices used should ideally be for tradeable goods relevant to the group being studied (in this case importers). Due to data limitations, wholesale or producer price indices have been used.⁵

When the RER (or NER) of any year is divided by the RER of the chosen base year, the *real depreciation of the Indian rupee against the foreign currency*, that has occurred since the chosen base year, is obtained. Similarly, if relative inflation rates are not taken into account, *nominal exchange rate depreciation* is obtained. Table 1A and 1B provide estimates of real and nominal exchange rate depreciation in the value of the Indian rupee against the Pound Sterling, the US Dollar, the Deutsche (German) Mark and the Japanese Yen. Figures show the depreciation that has occurred by 1992-93 since each of the (base) years indicated in the first column.⁶

The weighted average of the RER or the NER across countries gives the *Real Effective Exchange Rate (REER)* and the *Nominal Effective Exchange Rate (NEER)* of the rupee. The weights chosen should be relevant to the group being studied. Clearly, import weights (that is the bilateral import shares of import originating countries) should be taken in this exercise. The weights used are the average import shares (among the four countries considered) for the three year period 1988-89 to 1990-91.⁷ Export and Trade Weighted indices are also reported in Table 1 for comparison. The percentage weights are given below along with the share of the four countries (the UK, the US, Germany and Japan) in total imports, exports or trade.

Weights	Pound Sterling	US Dollar	Deutsche Mark	Japanese Yen	4-country share in total
Import	21.69	32.93	22.59	22.80	36.18
Export	15.36	41.90	17.37	25.37	39.18
Trade	18.87	36.91	20.27	23.94	37.47

TABLE 2.2

**Effect of Import Duty and Real Effective Exchange Rate Changes on
the Real Landed Cost of Import of Selected Items**

Serial number	Description of Product /Product Category	Nominal tariff rate as a percentage of cif price*		Tariff mark-up in 1992-93 as a percentage of tariff mark-up in 1986-87	Real landed cost of imports in 1992-93 as a percentage of real landed cost of imports in 1986-87	Tariff rate for 1992-93 giving the same real landed cost of imports in 1986-87
		1986-87	1992-93			
		(1)	(2)	(3)	(4)	(5)
Chemicals and Minerals						
1	Naphtha	0	0	100	205	-51
2	Propylene	110	80	86	176	2
3	Dimethyl Teraphthalate (DMT)	190	110	72	148	41
4	Monoethyl glycol (MEG)	110	110	100	205	2
5	Caprolactum	90	50	79	162	-7
Polymers and Plastics						
6	Low Density Polyethylene (LDPE)	120	63	74	152	7
7	High Density Polyethylene (HDPE)	100	64	82	168	-2
8	Polypropylene	100	80	90	184	-2
9	Polyvinyl chloride (PVC)	75	41	81	165	-15
Iron and Steel						
10	Pig Iron	65	35	82	168	-20
11	Iron Bars & Rods	100	105	102	210	-2
12	Iron and Steel Structural	100	105	102	210	-2
13	Hot Rolled Iron Coils	100	57	78	161	-2
14	Cold Rolled Iron Coils	140	95	81	167	17
15	Galvanised Plain (GP) Sheets	140	110	88	179	17
16	Tinplate	95	85	95	194	-5
17	Tin Mill Black Plate (TMBP) Coils	100	50	75	154	-2
18	Steel Billets	55	45	94	192	-24
19	Steel Melting Scrap	25	10	88	180	-39
20	Specified Alloy Steels	80	90	106	216	-12

TABLE 2.2 (Contd.)

**Effect of Import Duty and Real Effective Exchange Rate Changes on
the Real Landed Cost of Import of Selected Items**

	(1)	(2)	(3)	(4)	(5)
Non-Ferrous Metals					
21 Copper Wire Rods and Bars	75	54	88	180	-15
22 Unwrought Nickel	80	60	89	182	-12
23 Unwrought Aluminium Ingots	50	35	90	184	-27
24 Other Unwrought Aluminium	90	105	108	221	-7
25 Unwrought Tin	80	85	103	211	-12
26 Unwrought Zinc	125	53	68	139	10
27 Unwrought Lead	125	85	82	169	10
Machinery and Equipment					
28 Super Heated Water Boilers	75	55	89	182	-15
29 Machine Tools: Peak Rated Items	110	110	100	205	2
30 Machine Tools: General Rate	75	80	103	211	-15
31 Machine Tools: Specified Milling Machines	35	60	119	243	-34
32 Machine Tools: Parts & Accessories	35	35	100	205	-34
33 Moulds and Dies for Plastic Articles	25	50	120	246	-39
34 Tower Cranes	75	55	89	182	-15
35 Self-Propelled Fork Lift Trucks	100	95	97	200	-2
36 Domestic Refrigerators	150	110	84	172	22
37 Generators with Output over 750 Watts	75	55	89	182	-15
38 Transformers with above 1 KVA capacity	75	55	89	182	-15
39 DC Micromotors (upto 13.5 Volts and 20 Watts)	75	75	100	205	-15
40 Electrical Resistors	75	80	103	211	-15
41 Black and White Television Picture Tubes	75	80	103	211	-15
42 Radio Transmitters	140	95	81	167	17
43 Oscilloscopes	100	95	97	200	-2
44 Specified Medical Equipment	40	40	100	205	-32

TABLE 2.2 (Contd.)

Effect of Import Duty and Real Effective Exchange Rate Changes on the Real Landed Cost of Import of Selected Items

	(1)	(2)	(3)	(4)	(5)
45 Specified Machinery for the Leather Industry	35	35	100	205	-34
46 Specific Machinery for the Garment Industry	35	40	104	213	-34
47 Specified Food Processing Machinery	50	40	93	191	-27
Other Items					
48 Mechanical Wrist Watches	140	110	88	179	17
49 Parts of Mechanical Wrist Watches	50	70	113	232	-27
50 Project Imports	55	55	100	205	-24
Unweighted Average of 50 Items	86	70	93	190	-10

Notes: (*) Nominal Tariff Rates: Basic Duty plus Auxiliary Duty less the effect of applicable exemption notifications. Unless otherwise indicated end-use based exemption notifications are not taken into account.

(1) Tariff mark-up: 100 plus the (percentage) ad valorem tariff rate.

(2) Real landed cost of imports : Real effective exchange rate x Tariff mark up. Computations assume that all international (cif) prices of imports increase at a uniform rate equal to the rate of inflation in the import originating country: commodity to commodity relative price changes are ignored.

(3) Equivalent ad valorem rates for specific rated items are annual averages, or, where information was available for 1986-87, the lowest rates prevailing in that year.

(4) Naphtha : Raw naphtha imported for manufacture of petrochemicals and fertilisers.

(5) Due to non-availability of comparable cif prices for 1986-87, PVC duty in 1986-87 has been approximated as (Specific duty in 1986-87 x Ad Valorem rate 1988-89).

PETROCHEMICALS

3.1 The petrochemical industry produces a vast array of products catering to the priority and core sectors of the economy, like agriculture, irrigation, transportation, communication, defence, electronics and space research and supplementing natural products like paper, wood, metal, cotton and wool. The products of the petrochemical industry can be classified into three major groups, namely, polymers (including commodity plastics, synthetic resins and synthetic rubber), chemicals and synthetic fibre and fibre intermediates. We deal with petrochemical building blocks common to all the three groups and polymers as also natural synthetic rubber in this Chapter. The other two groups are dealt with in subsequent chapters.

3.2 The production capacities and consumption of major polymers, chemicals, fibre and fibre intermediates in 1979-80, 1984-85 and in 1990-91 are given in Table 3.1. The growth trend in capacity and consumption of petrochemicals in terms of compound annual rate of growth for various sectors within the petrochemical industry may be seen in Table 3.2.

3.3 The first major initiative in setting up a domestic base for the production of petrochemicals was taken in 1977-78 with the commissioning of aromatic and olefinic complexes of the Indian Petrochemicals Limited (IPCL) in Vadodara. Though the industry has ever since grown at a fairly high rate, the domestic production of important petrochemical products, particularly the polymers, has been unable to meet the growing demand as a result of which the import dependency has been quite high. Even now the import dependency is nearly 60 per cent in the case of polymers.

Petrochemical Building Blocks

3.4 Ethylene, propylene and butadiene are the essential building blocks for petrochemicals. The domestic capacity, estimated production, estimated import, average domestic price and international price of these building blocks for the year 1992-93 and the existing duty rates are given below:

Name	Capacity (in '000 MT)	Estimated production (in '000 MT)	Estimated import (in '000 MT)	Domestic price (exclusive of excise duty) (in Rs./MT)	Inter- national price (in US \$/MT)	Domestic price/ cif	Import Duty (B+A) price (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ethylene (5 units)	528	369	140	16,000	400	1.31	25
Propylene (5 units)	230	200	Nil	14,700	400	1.20	80
Butadiene (5 units)	54	24	26	21,000	415	1.65	40

3.5 Interestingly, propylene is subjected to the highest import duty among the major petrochemical building blocks, though it has the lowest domestic price to cif price ratio. Propylene is the building block for polypropylene and acrylonitrile (the basic input for acrylic fibre) which attract fairly high nominal duties of 80 per cent and 65 per cent, respectively. The duty rate of 80 per cent on propylene would mean a correspondingly lower effective rate of protection in respect of polypropylene and acrylonitrile. The irrationality of the duty structure is apparent when we consider the fact that more than 60 per cent of the total consumption of polypropylene and acrylonitrile is met by imports. We are, therefore, of the view that the duty rates of propylene needs to be brought down drastically to the same level as that of ethylene and butadiene. These building

blocks are produced in the same naphtha cracker as different fractions and there is no justification for providing protection at different rates. The Committee is of the view that these building blocks for the petrochemical industry should have a rate of import duty of 15 per cent by 1997-98. The reduction of duty rate on propylene will open up the option of their import which will be cheaper than what is manufactured from the $c_2 - c_3$ stream (LPG), a costlier feedstock than naphtha. This will give considerable advantage to the domestic manufacturers of polypropylene and acrylonitrile.

3.6 The other important building block is styrene which is manufactured from ethylene and benzene, a product of naphtha reforming. The estimated production and import of benzene and styrene for the current year, the domestic and international prices and the existing duty rates are given below:

Name	Capacity (in '000 MT)	Estimated production (In '000 MT)	Estimated import (In '000 MT)	Domestic price (exclusive of excise duty) (in Rs./MT)	Inter- national price (in US \$/MT)	Domestic price/ cif	Import Duty (B+A) price (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Benzene	294	250	40	16,550	400	1.31	25
Styrene	42	35	Nil	33,000	605	1.79	40

3.7 In the manufacture of styrene from benzene and ethylene, an intermediate product, namely, ethyl benzene arises, the duty on which was reduced this year from 40 per cent to 25 per cent, the same rate as applicable to benzene. We are of the view that there is no need for having a differential duty structure for benzene, ethyl benzene and styrene. By 1997-98 these commodities may attract the same rate of 15 per cent as other building blocks, viz., ethylene, propylene and butadiene. With this, the present anomaly of

having different levels of import duties on the building blocks for different polymers will be removed.

3.8 Another anomaly in the tariff rates for building blocks and intermediates is the case of ethylene dichloride (EDC) and vinyl chloride monomer (VCM). The production chain of polyvinyl chloride (PVC) from the basic building block, ethylene, goes through two intermediate products, EDC and VCM. The rate structure in the case of these products is as follows:

Ethylene	25 per cent
Ethylene Dichloride	40 per cent
VCM	10 per cent
PVC	41 per cent

3.9 Though VCM is the value added product from EDC, it bears a lower rate at 10 per cent than its precursor EDC which bears a rate of 40 per cent. This means negative effective rate of protection for VCM. As we have earlier observed, there is no need for having differential duty structure for various intermediates and building blocks for polymers. EDC and VCM should attract the same duty of 15 per cent as applicable to other building blocks. Similarly, the duty on ethylene oxide, an essential input for Monoethylene Glycols (MEG), may also be gradually reduced to 15 per cent from the present level of 110 per cent.

3.10 The Committee, therefore, recommends a uniform duty of 15 per cent for all the building blocks and intermediates, such as ethylene, ethylene oxide, propylene, butadiene, benzene, ethyl benzene, styrene, ethylene dichloride and vinyl chloride monomer. With the depreciation of the rupee and given the time for adjustment till 1997-98, Indian industry will be able to function competitively vis-a-vis foreign producers.

Polymers

3.11 Polymers constitute the most important sector in the petrochemical industry because of their versatile uses and their ability to replace products like paper, glass, metals, wool and cotton which are produced from natural resources. The domestic consumption of commodity plastics has increased by 4.5 times in the period between 1979 and 1990. The present level of consumption of individual commodity plastics and the estimated consumption in 1999-2000 is given in Table 3.3. Even if the per capita consumption grows in 2000 A.D., as has been estimated, to 2.5 Kg. from the present level of 1 Kg., it will still be very

much below the present world average level of 15 Kg.

3.12 The import dependency of plastics has increased from 37 per cent of the consumption in 1984-85 to nearly 60 per cent in 1991-92. The production-import profile from 1985-86 to 1991-92 is given in Table 3.4. The present import tariff for plastics is given below:

Low Density Polyethylene (LDPE)	50% + Rs.3000/tonne (about 63 per cent)
High Density Polyethylene (HDPE)	50% + Rs.3000/tonne (about 64 per cent)
Polypropylene (PP)	50% + Rs.5000/tonne (about 78 per cent)
Polysterene (PS)	50% + Rs.1000/tonne (about 53 per cent)
Polyvinyl Chloride (PVC)	30% + Rs.2000/tonne (about 41 per cent)

3.13 The trend of average international prices of polymers in dollars during 1985-86 to October, 1992-93, is shown in Annexure III.1. By and large, the prices of all the polymers have moved over the years in a particular pattern. It will be seen that the average prices during the period 1985-86 to 1986-87 were around the same level as those prevailing this year. In fact the international prices of PS, HDPE and LDPE are higher in 1992-93 than in 1985-86; and the price of PP is almost the same. This means that with the rupee devaluation in 1991 and partial convertibility of rupee in 1992, the domestic producers have got very much higher level of protection than in 1985-86 and even a higher level than what was available in 1991-92 since the import duty rates on plastics excepting for PVC (in which case the duty was reduced by 20 percentage points) have not been brought down during these two years

and are at as high levels as in 1985-86.

3.14 Annexure III.2 traces the movement of average domestic prices during the period 1985-86 to 1991-92. The domestic producers increased the prices of all commodity plastics rather steeply in 1988-89 and 1991-92 as compared to the prices during the immediately preceding years. It would appear that the high level of protection and the increased cost of imports owing to the large increase in the international price of plastics during the year 1988 and in the first half of 1991 contributed significantly to the increase in domestic prices. Even though the international prices (in dollars) came down in 1991-92, the domestic prices did not.

3.15 The ratio between domestic selling prices (exclusive of excise duties) and cif prices for different plastics are given below:

Product	Domestic sale price to cif (end of Oct.92)
LDPE	1.55
HDPE	1.58
PP (HP)	1.63
PS	1.67
PVC (Suspension)	1.45

3.16 The high import duty is reflected on the domestic price and the steep increase in domestic price of plastics during 1988-89

and 1991-92 is attributable to the high level of protection enjoyed by the domestic industry in these periods. Therefore, the aforesaid ratios do not indicate the required level of protection.

Cross-country Comparison of Cost of Production and Import Duties

3.17 The costs of production for different commodity plastics in major plastics producing Asian countries are given in Table 3.5. A cross-country comparison of the import duty rates on plastics and their various inputs is given in Table 3.6.

3.18 It is clear that according to these cost estimates, disadvantages suffered by the Indian industry in this sector are not large enough to warrant the present very high levels of import duties.

Reasons for the Comparative Cost Disadvantage in India

3.19 The main reasons for comparative cost disadvantages of domestic producers are low-scale of production, long gestation period, high capital costs, high import duties on inputs and multiple levies on them, particularly at the state level. The average capacity of plants in operation in selected countries is given below:

(in tonnes per year)

Product	India	China	Korea	Thailand
Ethylene	105,000	103,000	250,000	-
Butadiene	18,000	-	47,000	-
Benzene	60,000	-	85,000	-
LDPE/LLDPE	50,000	80,000	135,000	87,000
HDPE	62,000	87,500	93,000	-
PP	38,000	33,000	170,000	-
PS	14,000	4,500	70,000	23,000
PVC	46,000	80,000	180,000	54,000

Source: Same as for Table 3.6.

3.20 Even if we compare our present scale of production, which is much better after the commencement of two large sized plants, at Nagothane and Hazira, with the scales of production in other Asian countries, it could be said that our producers cannot reap the same degree of scale economies as some of the foreign producers and hence suffer from some cost disadvantage.

3.21 The basic price of naphtha excluding sales tax at present is about the same as its international price. But the indigenous price of the gas fractions ($C_2 - C_3$ gases along with a little quantity of C_4 gas) is much higher than the international price: our domestic price of gases is much higher than those in Malaysia or Indonesia. If the higher prices are maintained by the Government, the production of polyethylene, polypropylene and PVC through the gas route will appear to be unviable.

Recommended Duty Structure for Plastics in 1997-98

3.22 As we have mentioned in paragraph 3.13, the domestic producers of plastics are now enjoying a higher level of protection than those available in 1985-86 or 1986-87, particularly on account of rupee depreciation since then. It is, however, true that the domestic producers suffer from certain cost disadvantages which have to be taken into account for fixing an appropriate level of duty. We have already mentioned some of the factors contributing to comparative cost disadvantages in India. However, from the figures furnished in Table 3.5, the relative cost disadvantages are not very large.

3.23 One of the factors contributing to the relative cost disadvantage of the domestic producers is the relatively low scale of production of most of the existing plants as compared to other plastics producing Asian countries like Korea, Thailand and China. The disadvantage due to scale will, however, be substantially reduced if the proposed large size plants come up as scheduled. Another

important reason for the cost disadvantage of domestic industry is the relatively higher cost of inputs. With the reform in the import tariff, the inputs are likely to be available to our producers at prices only slightly above the international price. Once the import duty rates are brought down across the tariff, the domestic producers of inputs will be disciplined by the market forces. The introduction of Modvat on capital goods, as we are suggesting, will also bring some relief to the domestic producers. These measures coupled with reduction of interest rate to a reasonable level and extension of MODVAT to naphtha and other petroleum feedstocks should enable the industry to remain competitive even if import duties are brought down substantially by 1997-98. We hasten to add that the Government must ensure that our producers get the feedstock, naphtha or gases or NGL, which are at present under the administrative price regime, at around the international prices.

3.24 Thus, it should be possible to bring down the import duty of plastics from the existing level gradually to a uniform rate of 25 per cent by 1997-98 without hurting the domestic manufacturers provided the suggested measures for bringing down the domestic cost of production are also adopted.

Performance Polymers - Engineering Plastics and Thermoset Resins

3.25 Performance polymers include acrylonitrile - butadiene - styrene (ABS), polymethyl methacralite (PMMA) and poly-propylene filled with talc or mica and a whole range of alloys and blends of these materials. Polyethylene terephthalate (PET), a condensation product of DMT/PTA and ethylene glycol may also be said to belong to this group though its dominant use is in the textile industry as synthetic fibre. The non-fibre application of PET is mainly in containers.

3.26 There are five major engineering thermoplastic resins which in order of volume of consumption are polyamides (PA) or

nylons, polycarbonates (PC), polyacetals (POA), modified polyphenylene oxide/ether (M-PPO) and polybutylene terephthalate (PBT). These are primarily used in industrial applications requiring structural performance at elevated temperature. They also have electrical and thermal insulation attributes.

3.27 In India, the use of engineering plastic materials started in the latter part of 1980s, mainly in the electronics and telecommunication industry. The current production, imports and estimated demand in 1995-2000 A.D for these five engineering thermoplastics are given below:

(in tonnes)

Product	Indigenous capacity	Domestic production	Import	Estimated demand	
				1995	2000
PA (3 units)	10000	8600	1000	16000	20000
PC (Nil)	Nil	Nil	3000	7500	15000
POA (Nil)	Nil	Nil	2500	4500	9000
PPO (Nil)	Nil	Nil	300	3500	7000
PBT (1 unit)	1200	700	Nil	4500	5000

Source: Department of Chemicals and Petrochemicals

Thermosets

3.28 This is the only group among the various categories of polymers where self-sufficiency has been achieved. Thermosets have diverse applications in laminates, paints, varnishes, adhesives, sealants, etc. In terms of use, the most

important thermosets are: phenol formaldehyde (PF), urea formaldehyde (UF) and melamine formaldehyde (MF). Besides these, a significant volume of unsaturated polyesters are used by this industry. The present production and estimated demand in 1995 and 2000 are given below:

(in tonnes)

Product	Indigenous capacity	Domestic production	Import	Estimated demand	
				1995	2000
PF (50 units)	18000	15000	Nil	16500	18700
UF/FM (13 units)	16300	9000	Nil	12000	19000
U-Polyester (12 units)	11000	6000	Nil	8000	15000

Source: Department of Chemicals and Petrochemicals

3.29 The existing import duty rates for Performance Polymers, Engineering Plastics and Thermoset Resins are given below:

Polyacetals	50 per cent	ABS Co polymers	Rs.1000/MT+50 per cent ad valorem (about 53 per cent)
Polycarbonates	50 per cent	Styrene-Acrylonitrile}	
Polyphenylene	50 per cent	Co polymers	
		Polysulphones	65 per cent
		Methyl Acrylate Polymer	85 per cent
		All thermoset resins	110 per cent

Recommended duty structure for engineering plastics and thermoset resins

3.30 These groups of polymers are produced from the same building blocks mentioned in the earlier section for which we have suggested reduction of import duty to the uniform level of 15 per cent in 1997-98. A large number of intermediates arise in the production chain of these groups of polymers starting from the basic building blocks. These intermediates are organic chemicals classified under Chapter 29 of the Customs Tariff. We deal with this group in the next Chapter and are suggesting a uniform duty of 20 per cent for them by 1997-98. (At present, most of the goods attract the peak rate of 110 per cent). With this reduction in the duty on basic building blocks and intermediates, we believe that the domestic producers of these groups of polymers will be adequately protected if the import duty is reduced to the level of 25 per cent by 1997-98, as in the case of other

polymers - PVC, HDPE, etc.

Natural Rubber and Synthetic Rubber

3.31 India produces both natural rubber and synthetic rubber. At present, mainly three types of synthetic rubber, viz., polybutadiene rubber (BR), styrene butadiene rubber (SBR) and nitrile rubber (NBR) are being produced. The consumption of other types of synthetic rubber such as butyl rubber (Isoprene Isobutyl Rubber - IIR), ethylene propylene tar polymer (EDPM), silicon rubber, neoprene rubber and polychloroprene is met entirely by imports at present.

3.32 Though the world average consumption of synthetic rubber and natural rubber is in the ratio of 70:30, in India, the consumption ratio is the reverse, viz. 21:79. The production of natural and synthetic rubber and their imports from 1987-88 are given below:

(in MT)

Product	1987-88		1988-89		1989-90		1990-91		1991-92	
	Pro- duction	Import	Pro- duction	Import	Pro- duction	Import	Pro- duction	Import	Pro- duction	Import
Natural rubber:	235197	52283	259172	54658	297300	44540	364310	34635	366745	13405
Synthetic rubber:										
SBR	29106	4314	37866	1229	38084	3861	41548	3477	43000	4000
BR	14488	6437	15650	7270	15015	10585	15277	13023	17372	12428
NBR	871	NA	242	NA	293	2700	468	2932	500	3100
IIR	Nil	12392	Nil	16850	NIL	17600	Nil	15000	Nil	16000

Source: Department of Chemicals and Petrochemicals

3.33 The existing duty structure for natural rubber and the various varieties of synthetic rubber is as follows:

Natural raw rubber	80 per cent
Vinyl pyridine latex	110 per cent
Styrene butadiene rubber	110 per cent
Other synthetic rubber	90 per cent

3.34 The movement of duty rates for synthetic and natural rubber between 1986-87 and 1991-92 is given in Table 3.7.

3.35 Since 1986-87 the duty rates have increased by 20 per cent in the case of natural rubber and 10 per cent in the case of synthetic rubber. The international prices have been fluctuating in the same manner as in the case of other polymers - the present level being around the same as those in 1985-86 and 1986-87. But, unlike in the case of plastics, the import duties of synthetic rubber and natural rubber have not been reduced. The domestic industry would appear to be over-protected if we compare the current level of tariff with those in 1985-86 and 1986-87 taken together with the steep depreciation of the external value of the rupee with dollar prices remaining the same.

Building Blocks and Intermediates for the Manufacture of Synthetic Rubber

3.36 Synthetic rubber of different kinds like other polymers are produced from the same petrochemical building blocks - ethylene, propylene, butadiene, etc. We have earlier recommended reduction in the duty level on them to 15 per cent. Among the important intermediates are: acrylonitrile, neoprene, isoprene, isobutene, chlorobutadiene. The existing duty rates in respect of these intermediates are given below:

Acrylonitrile (ACN)	65 per cent
Neoprene	110 per cent
Isoprene	110 per cent
Isobutene	110 per cent
Chlorobutadiene	110 per cent

Recommended Duty Structure for Natural Rubber, Synthetic Rubber and Its Building Blocks and Intermediates

3.37 The building blocks and intermediates for synthetic rubber are essentially organic chemicals derived from petrochemical feedstocks. In the next Chapter we shall deal with them generally

and are recommending a duty level of 20 per cent for them in 1997-98. The import duty in respect of the aforesaid building blocks and intermediates for synthetic rubber mentioned above may also be brought down gradually from their present level of 110 per cent to 20 per cent in 1997-98.

3.38 As already mentioned in paragraph 3.35, the domestic natural and synthetic rubber industry is over-protected with the current level of tariff and the exchange rate as compared to the level of protection available in 1985-86 and 1986-87. We, therefore, feel that with the proposed duty reduction in respect of the basic building blocks and intermediates, domestic producers of synthetic rubber will be adequately protected if the import duty is reduced to the level of 25 per cent in 1997-98 which will be the rate for natural rubber and all other polymers including plastics. Since the production of rubber in the country is not adequate to meet the growing demands, the suggested duty reduction would help indigenous industries, such as tyres and tubes, hose pipes, conveyor belts and footwear.

Modvat for Petrochemical Inputs

3.39 At present, petroleum products are kept outside the scheme of Modvat. In Part I of the Final Report, we did not recommend the extension of Modvat to the whole range of petroleum products considering the fact that there is an administered price scheme for petroleum products. However, in the production of petrochemicals, some products of the POL group, mainly naphtha, gases including LPG are important inputs. There is a scheme of excise duty exemption for such products when used for the production of petrochemicals. We do not see any difficulty in extending Modvat to these goods as this will help the domestic manufacturers by reducing the cascading effect of the excise duty on inputs. We would, therefore recommend the extension of Modvat to naphtha and gases.

Recommended Duty Structure for Petrochemicals in 1997-98

3.40 To sum up, we recommend the following duty regime for all polymers including plastics and rubber:

- a. The import duty rates for polymers should be brought down gradually from the present level to 25 per cent by 1997-98;
- b. The import duty on basic petrochemical building blocks like ethylene, ethylene oxide, ethylene di-chloride, vinyl chloride monomer, propylene,

butadiene, benzene, ethyl benzene and styrene should be reduced gradually from their present level to 15 per cent by 1997-98;

- c. Import duty on various intermediates like neoprene, isoprene, isobutene and chlorobutadiene should be equated with the general rate for organic chemicals viz. 20 per cent by 1997-98;
- d. Modvat may be extended to inputs including naphtha, gases, liquified natural gas and other petroleum feedstocks.



Petrochemicals: Capacity and Consumption Trends

Category	1979-80		1984-85		1990-91	
	Capacity	Consumption	Capacity	Consumption	Capacity	Consumption
Polymers	296	247	351	430	481	892
Elastomers	60	42	72	65	72	105
Aromatics	177	165	177	183	315	357
Other chemicals	108	119	103	154	487	374
Synthetic fibres	116	88	177	186	588	454
Intermediates	109	90	220	224	655	791
	866	751	1100	1242	2598	2973



TABLE 3.2**Growth Trend in the Capacity and
Consumption of Petrochemicals**

	Rate of growth (1979-80 to 1990-91)	
	Capacity (Per cent)	Consumption (Per cent)
Commodity Plastics	4.50	12.40
Synthetic Elastomers	1.70	8.70
Synthetic Fibres	15.90	16.10
Fibre Intermediates	17.70	16.10
Aromatics	5.30	7.30
Other Petrochemicals	13.60	11.00
Petrochemicals	10.50	13.30

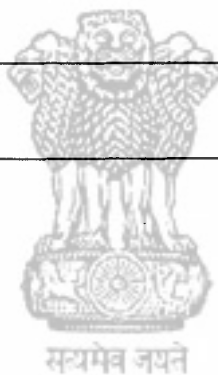


TABLE 3.3**Present Level of Consumption of Polymers and the Estimated Demand
in 1999-2000**

(in '000 tonnes)

Product	Present consumption	Estimated consumption * in 1999-2000
LDPE/LLDPE	225	482
HDPE	210	426
PP	180	514
PS	49	112
PVC	331	687

* The estimates have been made by the Planning Commission (Sengupta Report) after the Perspective Planning Group in its report (Kapoor Committee Report, 1985-86) made demand forecasts for all polymers which had projected higher consumption of all major polymers.



TABLE 3.4

Production-Import Profile of Polymers from 1985-86 to 1991-92

(in '000 tonnes)

	1985-86		1986-87		1987-88		1988-89	
	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import
	1	2	3	4	5	6	7	8
LDPE (5 units)	102	43	88	42	80	95	83	62
HDPE (3 units)	39	75	41	89	38	144	40	121
PP	24	18	24	27	26	37	38	51
PS	17	8	20	16	22	13	25	19
PVC (8 units)	105	60	123	54	120	108	137	131
	1989-90		1990-91		1991-92			
	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import		
	9	10	11	12	13	14		
LDPE		86	98	109	93	122	103	
HDPE		34	110	34	156	31	179	
PP		45	47	50	108	70	110	
PS		24	23	23	21	21	28	
PVC		137	125	147	150	181	120	

Source: 1. Indian Petro-chemical Statistics, 1991.
2. Figures furnished by the industry.

TABLE 3.5

**Commodity Polymers - Estimated
Costs of Manufacture**

Product	Production costs (US\$/tonnes)
Korea:	
LDPE	726
HDPE	676
PP	665
PS	863
India:	
LDPE	785
HDPE	696
PP	700
PS	912
China:	
LDPE	794
HDPE	733
PP	671
PS	895
Thailand:	
LDPE	710
HDPE	649
PP	667
PS	868
Malaysia:	
LDPE	664
HDPE	584
PP	654
PS	
Indonesia:	
LDPE	764
HDPE	665
PP	700
PS	903

Source: World Bank Sources, LDPE estimates assume 100,000 tpy tubular process, HDPE assumes 100,000 tpy liquid slurry, PP assumes 75,000 tpy gas base technology and PS 30,000 tpy batch process. Production costs include return on investment.

TABLE 3.6

Cross-country Comparison of Import Duties on Polymers

(in per cent)

Product	India	Indonesia	China	Malaysia	Korea
Ethylene	25	0	20	2	10
LDPE/HDPE	65	5	35	2	20
Ethylene	25	0	20	2	10
EDC	40	5	20	2	20
VCM	10	5	20	2	20
PVC	35	20	35	25	20
Propylene	80	0	20	2	10
PP	72	5	35	2	20
Butadiene	40	0	20	2	10
PBR	90	5	35	2	20
Benzene	25	0	15	2	10
Ethyl Benzene	40	0	NA	2	15
Styrene	40	0	25	2	15
PS	55	30	35	2	20
Benzene	25	0	15	2	10
Caprolactum	50	0	35	2	15
NFY	105	30	80	15	20

Source: Walter Vergara and Dominique Babelon (1991), **The Petrochemical Industry in Developing Asia - A Review of the Current Situation and Prospects for Development in the 1990s**, World Bank Technical Report No.113.

TABLE 3.7

**Movement of Duty Rates of Natural and Synthetic
Rubber from 1986-87**

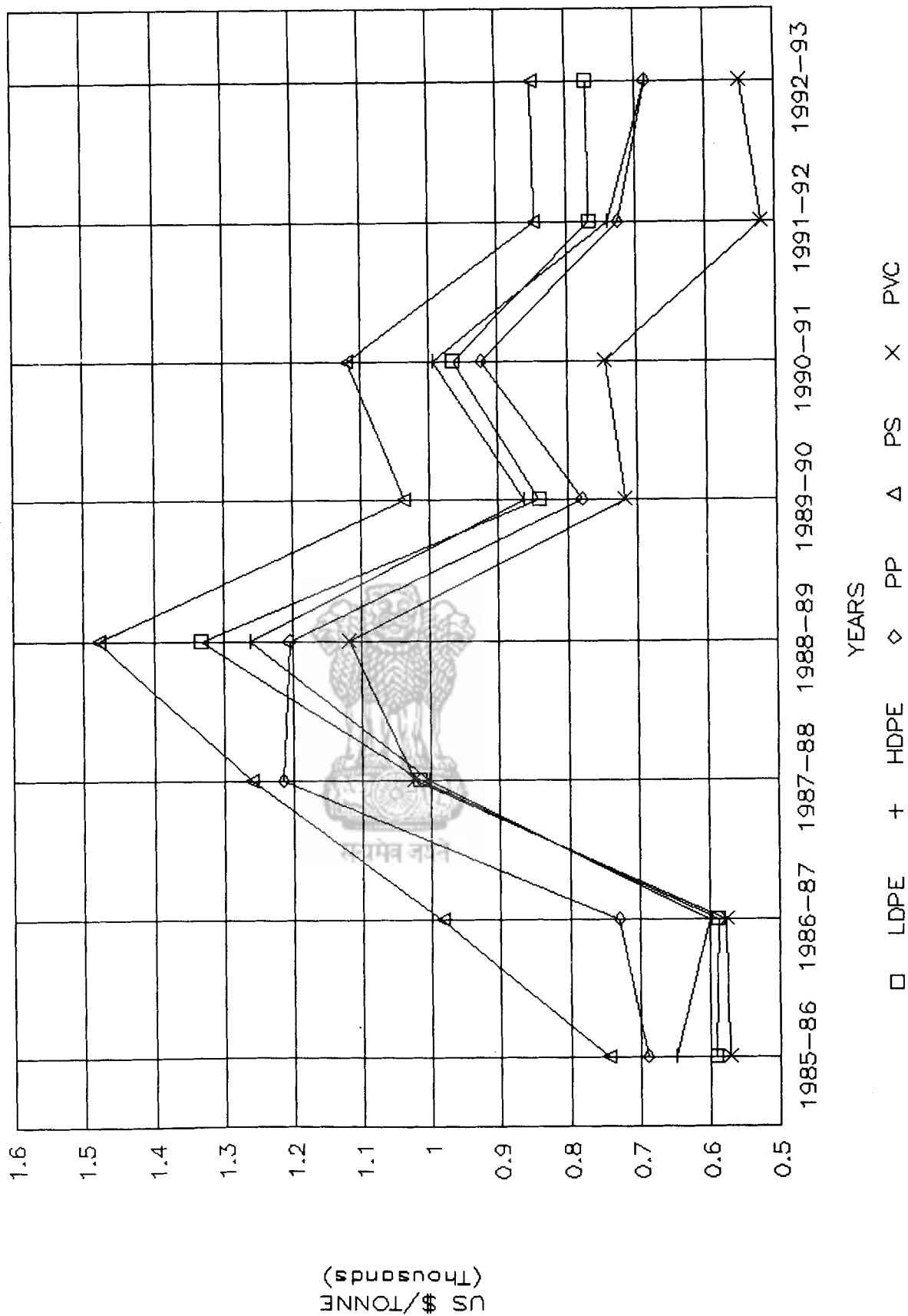
(in per cent)

Items	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
1. Raw natural rubber	60	60	65	65	65	70
2. Styrene-butadiene rubber	140	145	145	145	150	150
3. Other synthetic raw rubber	80	80	85	85	85	90



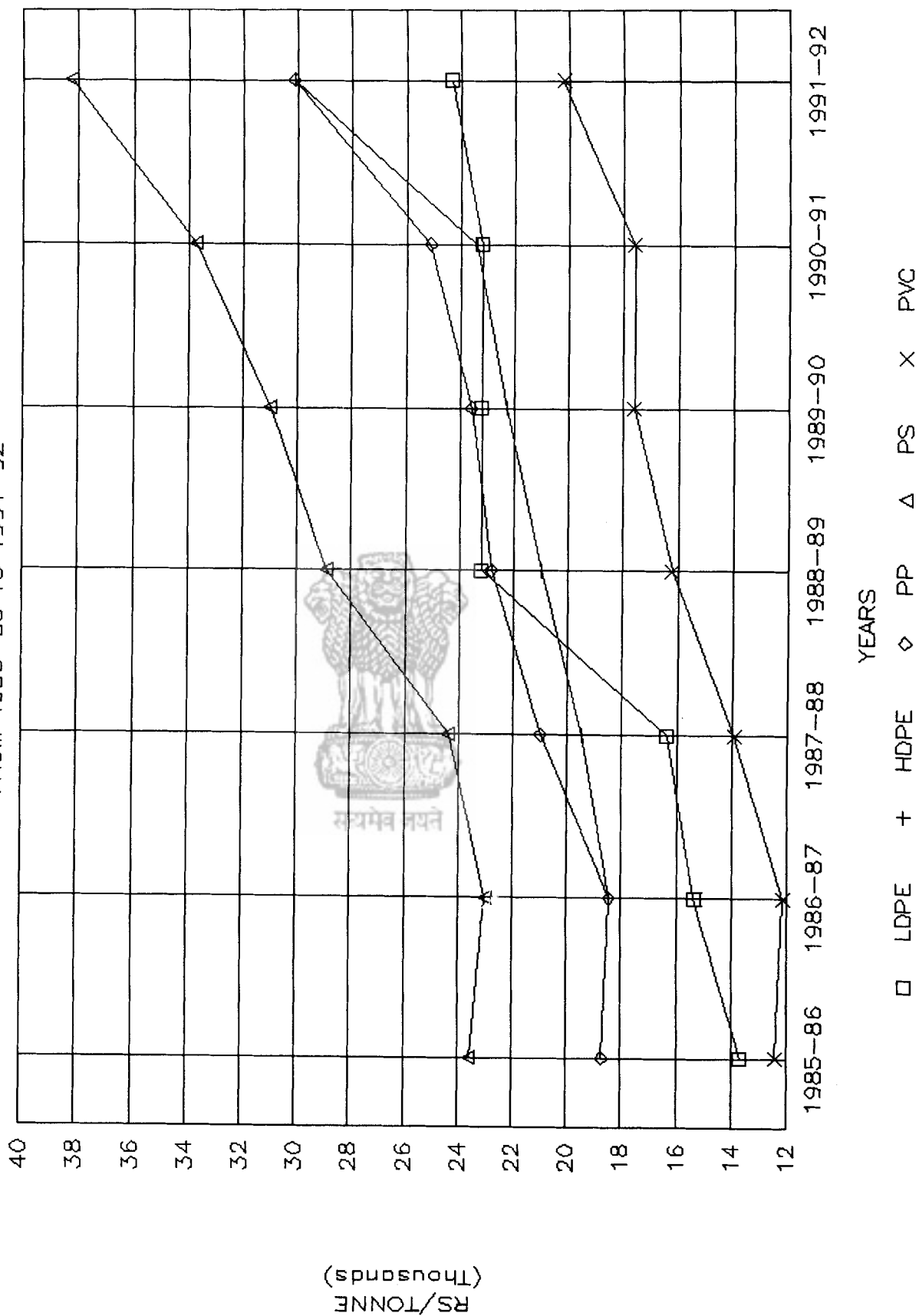
MOVEMENT OF CIF PRICES

FROM 1985-86 TO 1992-93 (UPTO OCT.92)



MOVEMENT OF DOMESTIC PRICES

FROM 1985-86 TO 1991-92



CHEMICALS

4.1 Chemicals are broadly classified into organic chemicals and inorganic chemicals. They find applications, mainly as basic inputs, in almost all sectors of the economy including agriculture, metallurgy and mining. Apart from the large number of petrochemicals which include plastics, synthetic resins, synthetic rubber, textile fibres and fibre intermediates, there are thousands of different chemicals which are not only used in products of chemical industry like medicines, fertilisers, pesticides, insecticides, dyes, detergents, explosives, photographic or cinematographic goods and paper and paper board, but also provide vital inputs in industries like electronic industry, iron and steel industry and other metal industries. Thus, the chemical industry plays a vital role in the industrial development of a country. In India, the chemical industry contributes around 10 per cent of the GDP and among the various industry groups, it has the highest individual weight in the output of manufacturing units. It also plays a very important role in the country's external trade.

4.2 The values of import, revenue and the collection rate of inorganic and organic chemicals in 1991-92 were as follows:

	Import	Revenue (including CVD) (Rs. crore)	Collection rate (in percentage) (including CVD) (Rs. crore)
Inorganic Chemicals	2060.91	400	19.41
Organic Chemicals	1462.00	1450	99.18

4.3 In this chapter, we consider the tariff structure of general inorganic chemicals

and organic chemicals which have not been covered by Chapters 3 and 5.

Tariff Structure - A Historical Perspective

4.4 The import tariff structure of organic and inorganic chemicals in the last decade presents, rather interestingly, a consistent pattern atleast in respect of the general effective rate which, unlike in other cases like machinery, electronics, plastics and metals, did not undergo frequent changes. The nominal rate during the entire 1980s was generally around 110 per cent. It was increased to 115 per cent and 120 per cent in between on account of increase in the auxiliary duty. At present, the nominal rate is the peak rate of 110 per cent. Thus, the import duties for chemicals have all along been kept at a high level.

4.5 In the case of inorganic chemicals, the major imports, including various inputs for the fertiliser industry like phosphoric acid and ammonia, molybdenum oxide and vanadium pentaoxide required for the manufacture of ferro alloys, radioactive isotopes, heavy water, enriched uranium etc., are either fully exempt from customs duty or they are subject to concessional rates of duty, which fact explains the low collection rate for this category. In respect of organic chemicals the collection rate (including CVD) has all along been very high and in 1991-92 it was almost 100 per cent. The collection rate for both inorganic chemicals and organic chemicals will, however, come down this year on account of full exemption from duty for phosphoric acid and exemption for specified drug intermediates, which account for substantial imports.

4.6 In the following paragraphs, we deal with certain individual chemicals.

Organic Chemicals

a. Linear Alkyl Benzene (LAB)

4.7 This is an essential input for the detergent industry. The domestic consumption of LAB increased from 70,000 tonnes in 1985-86 to 1,43,000 tonnes in 1990-91. Currently, there are three producers with an average capacity of 62000 tonnes.

4.8 As in the case of most other chemicals, the duty rate for LAB underwent changes within a narrow range over the years. During the period 1985-86 to 1987-88, the duty was 95 per cent which was increased to 115 per cent in 1988-89. The duty was later brought down to 100 per cent and then increased to 120 per cent. The existing duty is 110 per cent. Obviously, with the depreciation in the value of the rupee, the

extent of protection has increased tremendously.

4.9 At present, LAB is being exported. The export in 1991-92 was of the order of 24000 tonnes.

4.10 LAB being a petrochemical produced from the naphtha reformer, its international price has been fluctuating according to the general pattern of prices of petrochemicals. The present international price of this commodity is also not substantially different from the 1985-86 or 1986-87 level. For the last one year, there has been some stability in the international price of this commodity. The ratio of the domestic price and the fair price to cif price (as on October, 1992) worked out on the basis of cost figures furnished by one of the manufacturers is given below:

Cif price (\$ per tonne)	Domestic price excluding excise duty (Rs.per tonne)	Fair price excluding excise duty (Rs.per tonne)	Ratio of fair price to cif price	Ratio of domestic price to cif price
720	34750	24252	1.10	1.58

b. O-xylene

4.11 This is one of the products of the BTX (Benzene-Toluene-Xylene) plant. Almost 65 per cent of this chemical is used for the manufacture of phthalic anhydride. This is also used in paints, varnishes and thinners. The domestic production is not adequate to meet the demand and about 37,000 tonnes out of a total domestic consumption of 70,000 tonnes were imported in 1991-92.

4.12 At present, o-xylene attracts customs duty at the rate of 110 per cent. The duty rates which prevailed from 1985-86 to 1991-92 are given below:

- i. 110 per cent in 1985-86 and 1986-87;

- ii. 125 per cent in 1988-89 and 1989-90; and
iii. 120 per cent in 1990-91 and 1991-92.

4.13 The cif price, domestic price as on October, 1992 and their ratio are given below:

Cif price (\$ per tonne)	Domestic price excluding excise duty (Rs.per tonne)	Domestic price to cif price
430	24450	1.86

c. Cyclohexane

4.14 Cyclohexane is derived from benzene and is an essential input for the manufacture of caprolactum. The domestic production is not adequate to meet the demand and in 1991-92 about 11000 tonnes were imported. The present rate of duty on this item is 110 per cent. The ratio of domestic price to cif price as on September, 1992 was around 1.82 as may be seen from the figures given below:

Cif price (\$ per tonne)	Domestic price excluding excise duty (Rs.per tonne)	Domestic price to cif price
1029	57000	1.82

d. Aniline

4.15 This is a basic input for the dye industry. The production of this commodity is adequate to meet the domestic demand. In fact, significant quantities of dye stuffs and dye intermediates like this item are being exported. The import duty on aniline was 130 per cent since 1985-86 excepting for 1989-90 when the duty was 125 per cent and for 1991-92 when the rate was 120 per cent. The existing rate of duty on this chemical is 110 per cent.

4.16 The ratio of domestic price to cif price (average price between August and September, 1992) as may be seen from the figures given below was 1.69.

Cif price (\$ per tonne)	Domestic price excluding excise duty (Rs.per tonne)	Domestic price to cif price
890	46000	1.69

e. Toluene

4.17 Toluene is used as a raw material in the manufacture of solvents, thinners, dyes, pesticides, etc. The present rate of duty on this chemical is 110 per cent.

4.18 The domestic production of toluene has been just adequate to meet the demand. The international price of toluene has increased from \$265 per tonne to \$330 per tonne during March to July 1992. The average trend price of this commodity has been around \$280 per tonne. The average domestic price of toluene is Rs.12,500 per Kltr. The ratio of the domestic price to cif price works out to 1.50.

Inorganic Chemicals

a. Iodine

4.19 This is used mainly for iodisation of salts for which a concessional duty rate of 25 per cent has been prescribed. This concession is administered through an end use bond executed by the importers. The normal rate of duty leviable on iodine is 110 per cent. The ratio of domestic price to cif price (average price between April to September, 1992) was about 1.40.

b. Ammonia

4.20 Anhydrous ammonia imported for use in the fertiliser industry has been enjoying full exemption from customs duty while ammonia used in other industries, say, for the manufacture of caprolactum attracts 110 per cent.

4.21 The ratio of the domestic price for ammonia used in caprolactum industry and the international price (average price between August and September, 1992) works out to 1.50.

c. Phosphoric acid

4.22 Since August 1992, phosphoric acid imported for the manufacture of fertiliser has been made completely exempt from customs duty. Phosphoric acid used in other industries, however, attracts import duty at the rate of 110 per cent. The ratio of the fair selling price to cif price computed on the basis of information furnished by one of the manufacturers is 1.27.

d. Caustic soda

4.23 Recently, we have achieved self-sufficiency in this product which is an important input for various industries producing paper, cellulosic fibre, etc. Since there had been cases of undervaluation in this product, part of the import duty is expressed on a specific basis. The present import duty on this item is Rs.3500 plus 50 per cent. The ratio of the fair price as ascertained from one of the manufacturers to cif price is 1.08, while the ratio of domestic sale price to cif price (average price between April to September, 1992) was about 1.32.

Recommended Duty Levels in 1997-98

4.24 As we have said in the opening paragraph of this chapter, chemicals constitute basic inputs for a wide range of industries. All over the world, chemicals are subjected to very low rates of import duty. In the developing countries also the average import duty on chemicals is in the range of 15 to 20 per cent except in Pakistan where the duty rates are higher. (See Table 4.1).

4.25 The ratios of the domestic cost or price to the cif price for some of the individual chemicals mentioned in the preceding paragraphs indicate that the domestic industry does not require the present levels of high protective duty. The number of manufacturers of organic chemicals is very small and they may try to keep their prices close to the landed cost of imported material. The high level of import duty (even the collection rate for organic chemicals in

1991-92 was about 100 per cent) on such basic chemicals escalates the cost to the entire economy. If we take into account the extent to which the international prices of organic and inorganic chemicals have increased from the 1985-86 or 1986-87 level, the current tariff will be providing much higher protection as compared to those years, since the duty rates have remained more or less at the same level during this period.

4.26 Taking into account all these circumstances, we recommend that by 1997-98 all these basic inputs should have a protective duty of not more than 20 per cent. We have sufficient cost advantage in regard to most of the inorganic chemicals on account of our vast mineral resources which provide the basic raw material for inorganic chemicals. As regards organic chemicals, if the duty on basic petrochemical building blocks and intermediates is brought down to the level of 15 per cent and the feedstocks are made available to the producers at around international prices as we have suggested in the last chapter, a gradual reduction of the duty on organic chemicals to 20 per cent by 1997-98 would not hurt the domestic industry. It can be brought down to reach 15 per cent ultimately.

4.27 At present, specified inputs for fertiliser, pesticides, insecticides, fungicides and weedicides are fully exempt from import duties. We suggest that a minimum rate of 5 per cent on fertiliser inputs and 10 per cent on inputs for pesticides, insecticides etc., could be levied at an appropriate time during the reform period.

4.28 Bulk drugs and drug intermediates are two important categories of organic chemicals which carry varying rates from 0 to 110 per cent. We are not making any specific recommendation as regards the drug industry, which is under the administrative control of the Government, right from the licencing stage to the pricing of the products. However, the prices of drug intermediates are outside the administrative control of the Government. Their comparative cost

advantages and disadvantages will not be very different from those of other organic chemicals. We, therefore, recommend that the drug intermediates, for which the general effective import duty is 70 per cent at present, should have by 1997-98 the same rate of import duty, as other chemicals, viz. 20

per cent.

4.29 To sum up, we recommend that organic chemicals and inorganic chemicals in general should have a uniform duty level of 20 per cent by 1997-98.



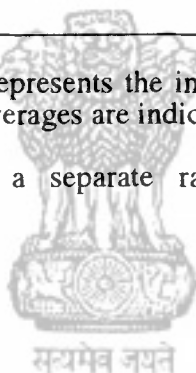
TABLE 4.1
Average Tariff rates on Chemicals in 1992
in Some Developing Countries

(in per cent)

Sl. No.	Countries	Organic chemicals	Inorganic chemicals
1.	Indonesia	5.00*	5.00*
2.	Brazil	15.96	7.07
3.	Mexico	9.80#	9.80
4.	Pakistan	44.70	44.70
5.	China	N.A.	18.40
6.	Philippines	13.60	9.80

* The rate for Indonesia represents the import-weighted average, while for other countries simple averages are indicated.

Mexico has indicated a separate rate of 4.9 per cent for basic petrochemicals.



MAN-MADE TEXTILE FIBRES AND YARN AND THEIR INTERMEDIATES

5.1 Man-made textile fibres and yarn are either cellulosic or non-cellulosic. The cellulosic fibres and yarn include viscose staple fibre (VSF), viscose filament yarn (VFY) and acetate filament yarn (AFY). The non-cellulosic fibre and yarn are derived from petrochemicals and include polyester staple fibre (PSF), polyester filament yarn (PFY), nylon filament yarn (NFY) and acrylic fibre (AF) as also polypropylene fibre (PPF) and polypropylene filament yarn (PPFY). The non-cellulosic fibre and yarn account for about two-third of the total production of man-made fibres and yarn in the country. Out of the total production of man-made fibre and yarn which was of the order of 617 million kg in 1990-91, the production of non-cellulosic fibre and yarn was of the order of 406 million kgs., while that of cellulosic fibre and yarn was 211 million kgs.

5.2 Synthetic textile fibres derived from petrochemicals have become critically important to our economy in view of the growing clothing needs of our population which cannot be met alone by natural fibres like cotton and wool. The production and import of the synthetic fibres and yarn during 1985-86 to 1991-92 is given in Table 5.1. The bulk of the requirement of synthetic fibre and yarn is met through indigenous production.

5.3 In respect of PSF and AF, there is at present considerable under-utilised capacity. The capacity utilisation in 1990-91 was only 52 per cent in the case of PSF and 65 per cent in the case of AF. In respect of PFY and NFY, there has been almost full capacity utilisation. Out of the indigenous production of PSF about 32 per cent was exported in 1989-90 and about 16.4 per cent in 1991-92. As regards PFY, the exports increased from 0.1 per cent of the production

in 1990-91 to 2.40 per cent in 1991-92. There is no significant export in the case of other petrochemical fibres/yarn.

Duty Structure of Fibres and Yarn

5.4 The present import duty structure for various varieties of synthetic fibres and yarn is given below:

PSF		110 per cent
PFY		110 per cent
NFY:	(a) Below 833.33 decitex	105 per cent
	(b) Others	110 per cent
AF		110 per cent
PPFY		110 per cent
VSF		50 per cent
VFY:	(a) Below 600 deniers	55 per cent
	(b) Others	65 per cent
AFY		85 per cent
CFY		35 per cent

5.5 Table 5.2 gives the levels of import tariff on synthetic fibres and yarn from 1985-86 to 1991-92.

5.6 The ratios of the present domestic prices to the cif prices in October 1992 for some of the fibres and varieties of yarn were as follows:

PSF	1.47
PFY	1.18
NFY	1.41
AF	1.38

5.7 Obviously, the domestic industry does not require the present high level of protection of 110 per cent. The level of protection can be brought down even below the levels indicated by the above figures if the high levels of the import duty on inputs and

intermediates as existing at present are lowered.

Fibre Intermediates

5.8 The production chain of various non-cellulosic fibres is as follows:

(i) PSF/PFY:

Naptha->P-xylene-->DMT/PTA ⁸ -->	} PSF/PFY
Naptha/Gas->Ethylene-->	
Ethylene oxide --> MEG ⁹	

(ii) NFY:

Naptha/Gas->Benzene->Cyclohexane->
Caprolactum-->NFY

(iii) AF:

Naptha/Gas->Propylene->Acrylonitrile->AF

iv) PPFY:

Naptha/Gas->Propylene->Polypropylene->PPF/PPFY

5.9 The current rates of import duty on important fibre intermediates are as under:

P-Xylene	85 per cent
MEG	110 per cent
Caprolactum	50 per cent
ACN	65 per cent
DMT	110 per cent
PTA	110 per cent

5.10 The import tariff for important fibre intermediates since 1985-86 is given in Table 5.3.

5.11 The production-import profiles of various fibre intermediates as in 1991-92 are shown in Table 5.4. It may be seen that in 1991-92, the import intensity was quite high in respect of ACN, Caprolactum and MEG. Annexure V.1 traces the movement of the average international prices of fibre intermediates since 1986-87. The international prices of fibre intermediates followed broadly the same trend as indicated for other petrochemicals in Chapter 3. It is

noticed that prices of all the intermediates were higher in 1991-92 than in 1986-87, except for caprolactum.

5.12 The ratios of the domestic prices (excluding excise duty) to the cif prices in October 1992 for the important fibre intermediates were as follows:

P-xylene	1.68
MEG	1.80
Caprolactum	1.49
ACN	1.63
DMT	1.92
PTA	1.83

5.13 It may be pointed out that the ratio between the domestic price and the cif price mentioned in the preceding paragraph for various fibre intermediates may not be indicative of the relative cost disadvantages of our manufacturers, or in other words, they do not necessarily indicate the required level of protection. One of the known consequence of high level of import duties is high domestic price for the same commodity even though it is manufactured indigenously, since the domestic manufacturers would naturally attempt to increase their base price as close to the landed cost as possible. Further, the high domestic cost if also attributable to the high level of duty on the inputs for the fibre intermediates.

5.14 In the following paragraphs, we mention briefly some of the relevant facts in respect of individual fibre intermediates.

P-xylene

5.15 This is one of the products of the benzene-toluene-xylene (BTX) plant in the naptha reformer. The domestic production of p-xylene had increased considerably with the new capacity addition by M/s IPCL in 1991-92. During that year, 17 per cent of the domestic consumption was met by imports. The import is likely to come down to about 10 per cent during the current year.

5.16 At present, the import duty on

p-xylene is 85 per cent. As may be seen from Table 5.4, the duty rates remained more or less at this level since 1986-87 except in 1988-89, when it was 120 per cent. Thus, if we consider the changes in the exchange rate and the fact that the present international price is around the same level as those which prevailed in 1986-87 it will be clear that the present level of protection is much higher than what was available earlier for this commodity.

MEG

5.17 MEG is produced from ethylene via the ethylene oxide route. This is one of the important inputs for the manufacturer of polyester.

5.18 The production and import of MEG in 1991-92 was 69000 tonnes and 64000 tonnes, respectively. With the commissioning of two new plants at Nagothane and Hazira, the domestic production capacity has improved considerably. When the production in these two plants stabilises, the import requirement may get considerably reduced.

5.19 At present, MEG attracts import duty at the rate of 110 per cent, which is around the same as in 1985-86 and 1986-87. It is clear that this item is also getting an extra protection compared to the level of protection available in 1985-86 or 1986-87 on account of the depreciation in the value of the rupee.

Caprolactum

5.20 The basic building block for caprolactum is benzene which, like p-xylene, is a product of the naphtha reformer. Benzene is hydrogenated to make cyclohexane which is reacted with ammonia to make caprolactum. In 1991-92, the indigenous production of caprolactum was 46000 tonnes, while the import was of the order of 25000 tonnes. With the commissioning of the proposed plant of Gujrat State Fertiliser Corporation (GSFC), the import requirement in the future will be considerably less.

Caprolactum attracts, at present, import duty of 50 per cent, whereas the duty on its basic inputs, viz., cyclohexane and ammonia is 110 per cent. In the preceding chapter, we have argued for reduction of the duty on general organic chemicals, which include cyclohexane and all inorganic chemicals including ammonia for use in industries other than fertiliser, from the present level of 110 per cent to 20 per cent by 1997-98. With this lowering of duty on inputs, the anomaly referred to above will be removed and the protective duty on caprolactum could be brought down substantially.

Acrylonitrile (ACN)

5.21 Acrylonitrile is produced from propylene. The domestic production of acrylonitrile has not kept pace with the increasing demand for it from the acrylic fibre industry, as a result of which about 50 per cent of the consumption of ACN in 1990-91 was met by imports. The main constraint in increasing the domestic production base of ACN is the inadequate availability of propylene and the high landed cost of imported propylene. With the reduction of import duty on propylene to 15 per cent by 1997-98, it will become available to domestic manufacturers of ACN at a fairly reasonable price. The reduction of duty of ammonia to 20 per cent from the present level of 110 per cent may also provide considerable relief to the manufacturers of ACN.

DMT/PTA

5.22 These are alternative intermediates for PSF/PFY, the other main input in their production being MEG. The indigenous production of DMT commenced in 1981-82 while the production of PTA started in 1988-89. At present, the domestic demand for them is met almost entirely through indigenous production. Imports accounted for less than 10 per cent of their consumption in 1991-92. Since PTA is a more efficient intermediate than DMT, the polyester industry all over the world is utilising more of PTA than DMT, the share of PTA being

around 65 per cent. In India also, the demand for PTA is increasing more rapidly than that for DMT. With the proposed installation of Manali Plant in 1996 and Saleempur Plant in 1997, the domestic demand of PTA can be met largely by indigenous production.

5.23 As may be seen from Table 5.4, DMT/PTA have always been subjected to very high rates of import duty. Now also, they attract the peak rate of 110 per cent.

Reasons for Cost Disadvantages of the Domestic Producers of Fibre Intermediates

5.24 The domestic manufacturers suffer from cost disadvantages on account of a combination of various factors. In Chapter 3, the reasons for the cost disadvantages in respect of the basic petrochemical building blocks, intermediates and plastics have been discussed in some detail. The same reasons are applicable in general to all fibre intermediates. For instance, the average capacity of DMT plants in Korea in 1988 was 1,00,000 tpy, while the capacity of the only DMT plant in India in 1988 was 20,000 tonnes. The present average capacity of the three DMT plants is 45,000 tonnes. Besides, the import duties on the essential inputs for fibre intermediates, viz., p-xylene, MEG, propylene, cyclohexane and ammonia are also very high.

5.25 It would be necessary for the domestic manufacturers to bring about effective cost reduction measures including modernisation and vertical expansion. Domestic manufacturers, wherever possible, should increase the capacity to the average international scale of production, and the basic petrochemical feedstock has to be made available to them at close to international prices. It is also important that State governments rationalise the rates and structure of sale tax, turnover tax, local levies like octroi, etc., on products of the petrochemical industry so that there is no cascading effect of various duties and taxes on the domestic petrochemical industry. As regards excise duties, we have earlier

suggested extension of Modvat to all petrochemical inputs. We may mention that we also expect lower interest rates and lower debt-equity ratio for the Indian industries in general by 1997-98 which will reduce the financing costs incurred by these industries.

5.26 If these measures are taken and given the depreciation in the real value of the rupee, we believe that domestic industries, which are providing basic industrial inputs, like chemicals, will be able to compete with the international suppliers at the duty level of 15 to 20 per cent by 1997-98. It is noteworthy that even this duty level is somewhat higher than those prevailing for such industrial inputs in other developing countries.

Recommendation for Import duty for Non-cellulosic Fibres and Yarn and Fibre Intermediates

5.27 The fibre intermediates, viz., p-xylene, MEG, caprolactum, acrylonitrile, DMT and PTA are petrochemicals which like all other petrochemicals, are derived from the naphtha cracker and naphtha reformer. In Chapter 3, we have recommended reduction of duty on all basic petrochemical building blocks like ethylene, propylene, benzene, ethyl benzene and styrene to 15 per cent by 1997-98. In respect of general organic chemicals, which are also derived from the petrochemical building blocks, we have suggested reduction of import duty to 20 per cent by 1997-98.

5.28 In paragraph 5.8, we have shown the production routes of the fibre intermediates and their corresponding fibres. P-xylene, MEG, Caprolactum, and DMT/PTA are produced in the naphtha reformer while acrylonitrile is produced from propylene in the naphtha/gas cracker. P-xylene is one of the products in the benzene-toluene-xylene (BTX) plant and it should be subjected to more or less the same level of duty as that applicable to other products of the BTX plant. At present, they are subjected to different rates of duty - 25

per cent for benzene, 85 per cent for p-xylene and 110 per cent for toluene. While benzene is produced directly from naphtha in the reformer, p-xylene is recovered through fractionation of mixed xylenes (consisting of o-xylene and p-xylene), which are produced in the naphtha reformer. Thus, there will be no anomaly if p-xylene (or o-xylene) is subjected to a slightly higher level of import duty of 20 per cent than for benzene viz., 15 per cent.

5.29 As regards MEG, it is at present more economical to import MEG rather than importing its input, ethylene oxide for two reasons: namely, high import duty of 110 per cent on ethylene oxide and the cost of transportation of this highly reactive material. With the reduction of import duty on ethylene oxide to 15 per cent, the domestic manufacturers of MEG will be in a position to compete with the international suppliers at a protective duty of 20 per cent. We, therefore, suggest gradual reduction of import duty on MEG from the present level of 110 per cent to 20 per cent by 1997-98. DMT and PTA manufacturers in the country will be benefited by the reduction of duty on their basic input, i.e., p-xylene. Therefore, the import duty on DMT and PTA can be brought down simultaneously to 20 per cent by 1997-98.

5.30 In Chapter 4, we have recommended reduction of duty for two basic inputs of caprolactum, cyclohexane and ammonia (the former being an organic chemical and the latter an inorganic chemical) to 20 per cent by 1997-98. At present, the rate of duty on these inputs is 110 per cent. The domestic manufacturers of caprolactum will remain well protected if the import duty is reduced from the present level of 50 per cent to 20 per cent by 1997-98.

5.31 As regards acrylonitrile, the domestic manufacturer will be considerably benefited by the reduction of duty on

propylene, its basic input, from the present level of 80 per cent to 15 per cent and the duty on acrylonitrile can also be lowered to 20 per cent by 1997-98.

5.32 In view of the foregoing, we are of the view that all fibre intermediates being essentially organic chemicals should be subjected to the same level of duty as that applicable to general organic chemicals, viz., 20 per cent, by 1997-98.

5.33 With the reduction of import duty on basic inputs and fibre intermediates, as we have suggested earlier, to the level of 15 per cent for basic building blocks like ethylene, propylene, benzene, styrene, etc., and 20 per cent for fibre intermediates like, p-xylene, MEG, DMT, PTA, etc., the domestic fibre and yarn industry will require still less protective duty than what the ratios between their domestic price and international price given in paragraphs 5.6 and 5.12 suggest. However, the domestic industry producing fibre intermediates will require at least 20 per cent protective duty in 1997-98 even after the reduction of import duty on their basic inputs. We have recommended a tariff rate of 25 per cent for all polymers (which include polyester chips). We consider that the same level of duty should be made applicable in the case of all fibres and yarn.

Cellulosic Fibres and their inputs

5.34 As mentioned in paragraph 5.1, the production of cellulosic fibre constitutes about one-third of the total production of textile fibre in India. The existing duty structure of various varieties of fibres including cellulosic fibres, VSF, VFY and AFY, has been indicated in paragraph 5.4. The main raw materials for the production of these cellulosic fibres are rayon grade wood pulp and caustic soda. The production and import of rayon grade wood pulp from 1985-86 are given below:

('000 tonnes)

1985-86		1986-87		1987-88		1988-89		1989-90		1990-91	
Produ- ction	Import	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import	Produ- ction	Import
98.3	33.7	122.7	6.9	157.3	15.6	160	8.9	204	7.1	218	22.4

5.35 The existing duty rates for the essential inputs of cellulosic fibre are as follows:

Rayon grade wood pulp	25 per cent
Caustic soda	50 per cent + Rs.3500 per tonne
Titanium di-oxide	90 per cent

protected if the import duty on all varieties of cellulosic fibre are brought down to 25 per cent by 1997-98.

Recommended Duty Structure by 1997-98

5.38 We would recommend that the following duty structure be given effect to by 1997-98 for the various textile fibres and yarn, their intermediates and basic inputs:

5.36 While rayon grade wood pulp attracts import duty of 25 per cent, wood pulp for the paper industry is completely exempt from import duty. We suggest that this anomaly should be removed and all varieties of wood pulp should be subjected to a uniform import duty of 10 per cent. As regards, other inputs like caustic soda and titanium di-oxide, we have suggested in Chapter 4 a gradual reduction of the duty level from the existing rates to 20 per cent, the general rate for chemicals.

1. Fibre intermediates like p-xylene, MEG, DMT, PTA, acrylonitrile, caprolactum 20 per cent
2. All textile fibres and yarn - cellulosic and non-cellulosic 25 per cent
3. Wood pulp 10 per cent
4. Caustic soda and titanium dioxide 20 per cent

5.37 With the reduction of import duty on the basic inputs, particularly, rayon grade wood pulp, the indigenous industry would remain well

TABLE 5.1

Production-Import Profile of Fibres/Yarn

(in '000 MTs)

	1985-86		1986-87		1987-88		1988-89	
	Produ- ction	Impo- rts	Produ- ction	Impo- rts	Produ- ction	Impo- rts	Produ- ction	Impo- rts
	1	2	3	4	5	6	7	8
PSF	42.84	14.40	63.69	11.63	78.80	5.90	112.32	5.42
PFY	67.41	7.61	79.65	7.61	111.80	5.20	143.00	7.53
NFY	38.78	2.14	37.16	0.94	34.30	0.20	35.93	0.29
AF	21.82	1.60	23.17	3.31	22.09	4.56	26.43	5.83
VSF	90.00	11.23	96.30	1.84	120.00	1.33	125.00	0.26
VFY	42.00	3.57	45.00	0.62	46.00	0.15	44.00	0.41
AFY	-	1.46	-	0.75	-	0.78	-	0.90
CFY	-	2.04	-	1.73	-	1.44	-	1.45

	1989-90		1990-91		1991-92	
	Produ- ction	Impo- rts	Produ- ction	Impo- rts	Produ- ction	Imports
	9	10	11	12	13	14
PSF	127.41	6.02	134.21	8.37	136	Nil
PFY	155.82	6.18	185.25	21.27	205	5.00
NFY	38.75	0.20	39.89	0.23	31	Negligible
AF	31.58	7.61	42.82	7.14	47	Negligible
VSF	147.65	0.12	160.17	0.02	158	Negligible
VFY	49.00	0.39	51.00	0.22	52	Negligible
AFY	-	0.06	-	0.03		N.A.
CFY		1.68	-	1.87		N.A.

TABLE 5.2

**Import Tariff for Important Varieties of Man-Made
Fibres and Yarn from 1985-86**

Items/Year	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
Polyester Staple Fibre (PSF)	175% + Rs9000 /MT	185% + Rs9000 /MT	190% + Rs9000 /MT	180% + Rs7000 /MT	180% + Rs7000 /MT	180% + Rs9000 /MT	150%
Polyster Filament Yarn (PFY)	225% + Rs15000 /MT	225% + Rs15000 /MT	225%	205%	205%	180%	150%
Acrylic Fire (AF)	140% + Rs12500 /MT	150% + Rs12500 /MT	155% + Rs.12500 /MT	145% + Rs10000 /MT	145% + Rs12500 /MT	150%	150%
Nylon Filament Yarn (NFY)	140%	140%	140%	130%	130%	100%	
VSF	60%	60%	60%	55%	50%	40%*	50%
VFY	45%	50% [@]	55%	45% ^{\$}	45%	45%	55%
Other VFY	45%	55%	60%	60%	60%	65%	65%

* This was increased to 50 per cent on 5th December, 1990. This rate is continuing since then.

@ This was increased to 55 per cent on 20th September, 1987.

\$ This was increased to 65 per cent on 15th December, 1990 and this rate continued till 24.7.91 when the duty was brought down to 55 per cent.

TABLE 5.3

**Import Tariff Rates of Important Fibre
Intermediates since 1985-86**

Item/Year	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
Para-Xylene (P-X)	--	80%	85%	120%	90%	80%	85%
Dimethyl Terephthalate (DMT)	140%+ Rs.3000 /MT	190% + Rs.3000 /MT	190%	195%	195%	150%	150%
MEG	110%	110%	150%	155%	90%	150%	150%
Pure Terephthalic Acid (PTA)	140% Rs.3000 /MT	190%	190%	195%	195%	150%	150%
Acrylonitrile (ACN)	110%	110%	110%	115%	60%	60%	65%
Caprolactum (CPL)	90%	90%	90%	75%	75%	75%	80%



TABLE 5.4
Production-Import Profile of Various
Fibre Intermediates in 1991-92

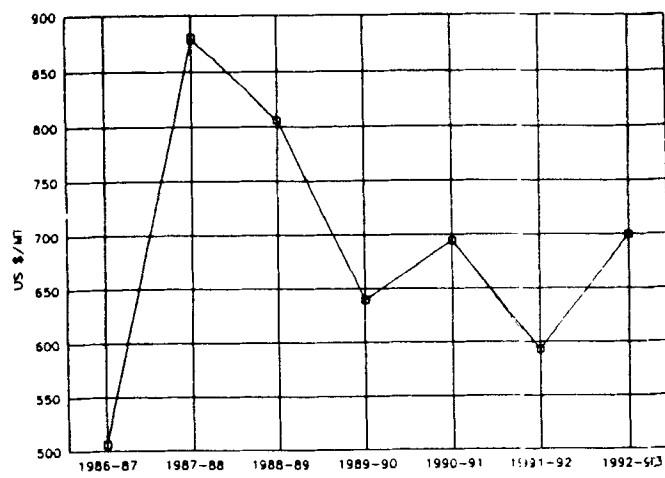
('000 tonnes)

Product	Production	Import
DMT	130	7
PTA	162	32
MEG	69	64
P-Xylene	171	34
ACN	26	25
Caprolactum	46	25

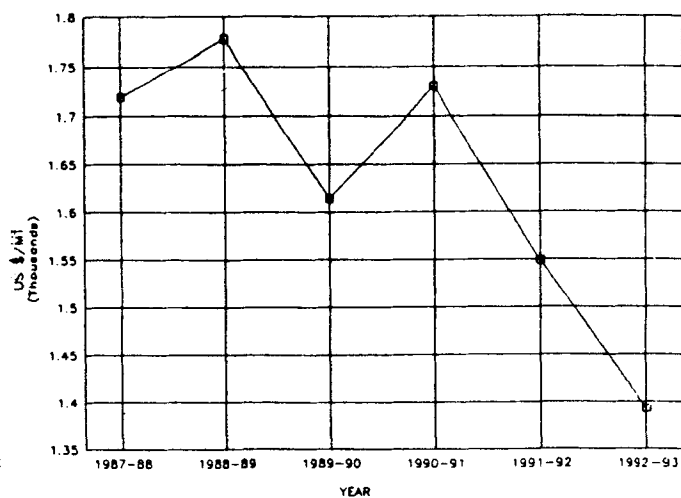


**MOVEMENT OF AVERAGE INTERNATIONAL
PRICES OF FIBRE INTERMEDIATES
FROM 1986-87 TO 1992-93
(UPTO OCTOBER, 1992)**

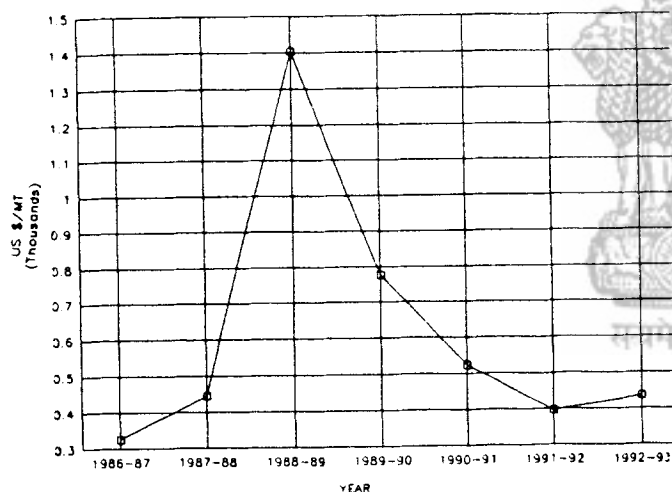
ACN



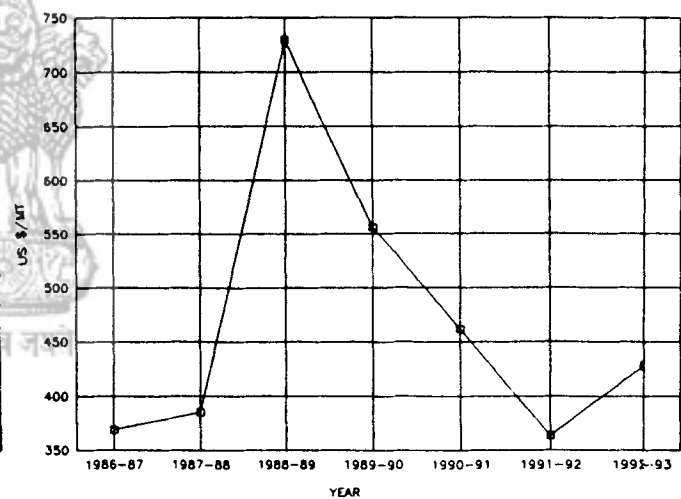
CAP



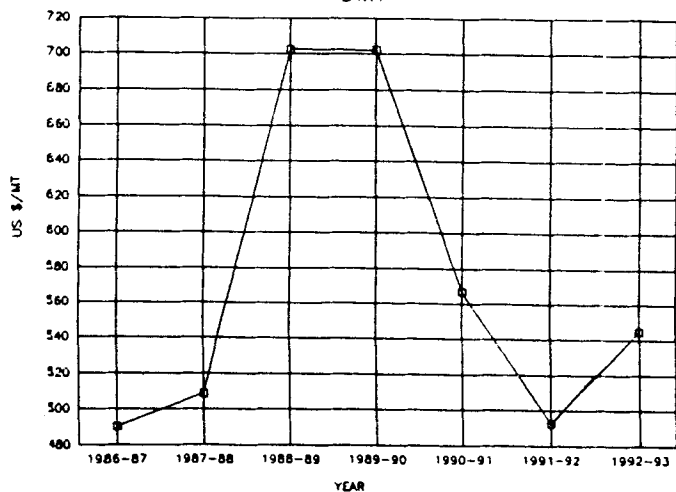
MEG



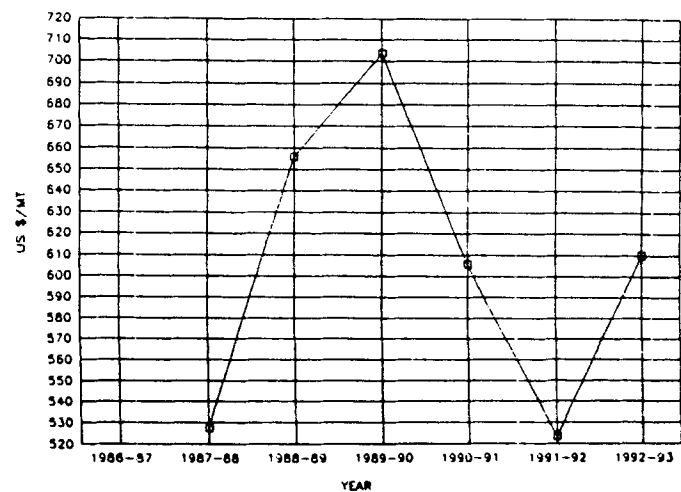
P-X



DMT



PTA



ACN - Acrylonitrile;
P-X - Paraxylene;

CAP - Caprolactum;
DMT - Dimethyl Terephthalate;

MEG - Monoethylene Glycol;
PTA - Terephthalic Acid

IRON AND STEEL

6.1 Steel is perhaps the most basic input for a large number of industries covering the entire economy including machinery, railways, ports, transport equipment, construction and household appliances. This is so notwithstanding the development in the last two decades of some substitutes like plastics. The major raw materials for the production of steel are iron ore, coking coal, limestone, dolomite and manganese. India is well endowed with rich resources of all these raw materials, in terms of both quality and quantity. Approximately, 5 per cent of the world production of iron ore and 3 per cent of coke is accounted for by India. Pig iron production in India is about 2 per cent of total world production. India is the eleventh largest producer of steel and produces 15 million tonnes of steel. However, the per capita consumption in India is 26 Kg. of crude steel as compared to the world average of 149 Kg. in 1990.

6.2 The primary sector of the iron and steel industry in India comprises the seven integrated steel plants - six in the public sector, and one in the private sector. Steel Authority of India Limited (SAIL) controls five out of the six plants in the public sector and is a major manufacturer of the iron and steel in India. The primary sector produces over 90 per cent of pig iron and about 70 per cent of steel in the country (Table 6.1). The steel making in the primary sector is mostly through the blast furnace (BF) and basic oxygen furnace/basic open hearth (BOF/BOH) route, and is mainly ore-based.

6.3 The secondary sector comprises (i) Electric ARC/ Induction Furnace (IF) industry (mini steel plants), (ii) Steel re-rolling industry, (iii) Steel wire drawing industry, (iv) Hot-rolled (HR) steel sheets/strips units, (v) Cold-rolled steel (CR) sheets/strips units, and (vi) GP/GC sheets/strips manufacturing industry.

6.4 This sector also produces a range of mild steel items, special steels and alloy steels by the process of electric melting of scrap and/or sponge iron in Electric Arc Furnace or Induction Furnace. Most of the units producing such steel are in the private sector except the Alloy Steel Plant at Durgapur and the Salem Steel Plant. Several factors like lower capital investment, shorter gestation period, adaptability of production range due to medium capacity of the furnaces and easy integration with downstream technological developments such as continuous casting and ladle metallurgy practices, have favoured the emergence and development of steel making through this process. Table 6.2 indicates production of various categories of steel items by the secondary sector.

6.5 There are about 1000 re-rolling units which normally convert products from slabs to HR strips or HR coils into CR strips. About 50 units produce 5.7 lakh tonnes of CR sheets/strips and 77 units of steel wire drawing industry produce 3.8 lakh tonnes of steel. There are 9 units manufacturing about 2.2 lakh tonnes of Galvanised Plain/Corrugated Sheets. Besides the Rourkela Steel Plant, there are two units in the private sector for the production of tin plates, and their production in 1990-91 was 0.7 lakh tonnes.

6.6 Iron ore reserves are located in Bihar, Orissa, Madhya Pradesh, Maharashtra, Karnataka, Goa, Andhra Pradesh and Rajasthan. The production of iron ore is through a combination of large mechanised mines in the public sector and several smaller ones in the private sector. The production of iron ore has been increasing over the years mainly due to the setting up of a number of sponge iron plants in the country.

6.7 Limestone, dolomite, kyanite and sillimanite are the other raw materials used as fluxes in the steel industry. Dolomite and fireclay are used as refractory materials.

6.8 Refractories are the primary material used for the internal lining of industrial furnaces. The raw materials for making special refractories such as sintered magnesia (including sea water magnesia), sintered/tabular magnesia and sintered mullite are being imported as they are not available internally.

6.9 Sponge iron is a metallic product produced by direct reduction of high grade iron ore or pellets into the solid state. This is a partial substitute for steel melting scrap used by the secondary steel sector. Table 6.3 indicates production details of sponge iron units. The indigenous availability of steel scrap is low and a large quantities of scrap are being imported.

Production, Imports and Exports

6.10 Trends in production, imports and exports of various categories of iron and steel items are shown in Table 6.4. Over 90 per cent of domestic needs of finished steel items are produced in the country. Dependence on imports has steadily declined from 11 per cent in 1987-88 to 5 per cent in 1991-92. Imports are estimated to decline to 4 per cent by 1996-97.

6.11 Table 6.5 indicates the quantities and the value of imports of different items of iron and steel during 1988-89 to 1991-92. The important items of import are steel scrap, pipes and fittings, HR coils, CR coils, electrical steel sheets, pig iron and railway material.

6.12 Pig iron is one of the basic raw materials for the engineering industry. The major producers of pig iron have been the integrated steel plants. Pig iron being a low value added item, the industry diverts only a part of its hot metal production as pig iron for sale.

6.13 Till 1991, imports of iron and steel were regulated and restricted. MMTC and SAIL were the main canalising agencies for the import of iron and steel products. However, as of now, all iron and steel items are allowed to be imported without any import restrictions.

6.14 The nature of the steel industry is such that it responds to drops in demand with steep price cuts rather than cuts in output. This is because of high fixed costs.

Competitiveness of Indian Steel

6.15 Indian iron and steel industry has certain cost advantages and disadvantages compared to its counterparts in developed countries. The main advantages are availability of high quality iron ore at substantially lower prices and cheap labour. The cost disadvantages have been attributed to factors internal as well as external to the industry. Internal factors include inability to contain the size of employment, inefficient handling of materials resulting in higher consumption of raw material, outmoded energy intensive technology, improper maintenance of equipment leading to frequent breakdowns, poor quality of output and inadequate attention to the recovery of by-products. External factors are cost of freight, levies, capital costs, etc.

6.16 Table 6.6 gives the cross-country comparison of crude steel production by different processes in 1990. In India only 41.3 per cent steel was produced through energy efficient BOF route and as high as 31.3 per cent steel was being produced through outdated Open Hearth method, which is an energy intensive process. Continuous casting, an energy efficient process has replaced the ingot route almost completely in the advanced steel producing countries like Japan and Korea. This is, however, only of recent origin in the Indian integrated steel plants (ISP) and only a small proportion of the total output of the ISPs is produced by continuous casting.

6.17 Table 6.7 indicates labour productivity in selected countries. In India, the productivity is 50 tonne per man-year compared to 429 tonnes and 351 tonnes per man-year in USA and Japan, respectively. Thus, the advantage of cheap labour is substantially lost because of lower productivity.

6.18 A comparison of the cost of production of hot metal (Table 6.8), liquid steel and saleable steel in the case of major steel producers abroad and SAIL, the major domestic producer, for the year 1990-91 reveals that SAIL is internationally competitive in the hot metal stage but not in the liquid steel stage in the processing chain of saleable steel production.

6.19 Comparative data on the components of saleable steel cost shown in Table 6.9 reveal that the cost of energy in SAIL plants is high. The depreciation and interest cost of SAIL has also been high, when compared to some developed countries. Local levies, royalty, Central sales tax, import duties and other local taxes add to the cost disadvantage of the domestic industry.

6.20 On an overall basis, the domestic cost of production is comparable to that of other countries. However, the apparent cost competitiveness of the domestic industry is due to the product mix. This is evident when we consider the competitiveness of higher value added products.

6.21 Due to the heterogeneous nature and quality differences of the various iron and steel products, cost and price comparison between domestic and international products is difficult to make. Nevertheless, an attempt has been made to compare the stockyard prices of SAIL and cif prices of normal grade of certain imported products. Details including the implicit tariff in the case of different products are given in Table 6.10 for the period 1988-89 to 1991-92. It will be seen that the domestic prices of pig iron, semis, bars and rods, structurals and plates

are competitive with respect to international prices. However, in the case of H.R.Coils, C.R.Coils, G.P.Sheets and Tin plates, the position is different and the price difference is 30 to 60 per cent. It is obvious that the industry will have to take necessary cost effective measures for ensuring the competitiveness in higher value added products. In any case, no product line should continue if high protection would be permanently needed (unless defence requirements are involved).

Structure of Import Duties

6.22 The protective import duty rates on important products of iron and steel industry from 1988 onwards are given in Table 6.11. From the analysis of the variations in the duty rates over a period of time, we find that the import duty in respect of pig iron, steel scrap and semis has been lowered. For the remaining products, the import duty has remained consistently high with minor variations. In the case of stainless steel, tariff rates have been very high, generally the peak rate. Stainless steel now attracts 110 per cent.

6.23 As of now, the import duty rates on important items are:

Scrap	10 per cent
Pig iron	30 per cent
Semis	45 per cent
H.R. Coils/Sheets	Rs.1100/tonne + 45 per cent (i.e., 57 per cent)
C.R.Coils/Sheets	Rs.6000/tonne + 45 per cent (i.e., 94 per cent)
G.P/G.C.Sheets	110 per cent
Electrical Steel sheets	110 per cent
Tin mill black plate (TMBP)	50 per cent
Tin plate	85 per cent
Stainless steel	110 per cent

6.24 The tariff rates for raw materials used in the iron and steel industry are shown

in Table 6.12. The rates given above and those in Table 6.12 show that the steep depreciation in the value of the rupee has not led to any substantial reduction in rates; hence the nominal rate of protection has gone up.

6.25 Indian import duty rates for the iron and steel industry are generally quite high when compared with other developing countries. For example, in Brazil, import duties on iron and steel ranges from nil to 25 per cent with a mean of 13.98 per cent. In Mexico, the average import tariff is 19.1 per cent. In Pakistan, the range is from nil - 100 per cent with a mean of 53.9 per cent. In China, the average tariff is 19.5 per cent.¹⁰

6.26 The important issues that arise regarding the tariff structure for the iron and steel industry are:

- i. Iron and steel are basic inputs for a whole range of engineering, construction and other industries. Higher prices of iron and steel lead to higher costs in the entire economy, which is undesirable. Iron and steel should, therefore, be available at internationally competitive prices or atleast near to such prices;
- ii. Cost disadvantages due to import duties on inputs for the industry should be minimised;
- iii. The import duty rates on various inputs of the iron and steel industry should in general be lower than the import tariff on final products;
- iv. There is no need to keep high tariff barriers in the case of semis, non-flat products and plates as domestic prices are reasonably competitive;
- v. There is marked escalation in import duty rates as the degree of processing increases. For example, the duty differential between C.R. and H.R stage is Rs.4900 per tonne. Similarly, the

duty differential between tin plate and tin mill black plate (TMBP) is 35 per cent points. This is against the guiding principle in the rationalisation of tariff rates as indicated by us in the Interim Report (Para 8.22).

6.27 In what follows, we discuss the proposed tariff structure to be brought about by 1997-98.

Recommendations

6.28 Indian coking coal has a high ash content mainly because of the sedimentary nature of its origin. The quality of coking coal has a direct bearing on hot metal production. This becomes crucial in the case of bigger blast furnaces. Coking coal is an input with major import bill in the iron and steel industry. Import duty on low ash coking coal is already 5 per cent. We are of the view that this rate can continue. Non-coking coal is used mainly by the iron and steel industry for captive power plants for power and process steam generation. The rate of import duty on non-coking coal is 85 per cent. The Committee recommends that this should also be gradually lowered to the level of 10 per cent so that the industry will have an option to import, in case non-coking coal at competitive rate is not available from indigenous sources.

6.29 The present import duty on coke with low-phosphorous content used in the manufacture of pig iron is 25 per cent. Coke with low-phosphorous content is a basic input similar to the non-coking coal for which we have recommended continuation of 10 per cent duty. We, therefore, recommend the import duty rate on coke with low phosphorous content be lowered to 10 per cent.

6.30 Refractory is the primary material used in the internal lining of industrial furnaces. The present import duty on refractory is 40 per cent.

6.31 Dead burnt magnesite is an important input in the manufacture of

refractories and the import duty on this item is 70 per cent. Fused magnesia, magnesia-chrome sinters, magnesia lime sinters and magnesia-alumina sinters, the other competing inputs, are subject to import duty at the rate of 70 per cent. We understand that these items are not available indigenously and are being imported for the manufacture of refractories. Here again, there is an anomaly in the duty structure. The final product, viz., refractories attract 40 per cent duty and the inputs (dead burnt magnesia, fused magnesia etc.), 70 per cent. Rates of import duty on inputs are higher than on the final product. The rate on inputs should be equal to or lower than the rate applicable on refractories, the final product. We recommend that this anomaly in import duty structure should be removed early. The present rate of 40 per cent on refractories is quite high. Keeping in view the rate of duty proposed for pig iron and steel, we recommend a rate of 15 per cent on refractories and a rate of 10 per cent on various inputs used in the manufacture of refractories.

6.32 We hope that the removal of the anomalies indicated in the preceding paragraphs will help reduce the cost disadvantages and encourage the healthy growth of the refractory industry as well as all segments of iron and steel industry.

6.33 At present, the import duty on hot briquetted iron (HBI) and sponge iron is 35 per cent and that on steel scrap 10 per cent. HBI/sponge iron and melting scrap of iron and steel are competing products and these are basic inputs in the production of steel. We do not find any economic reason to have differential rates on competing inputs. Different import duty rates on competing inputs interfere in the choice of inputs by the producers. This leads to inefficiency in production. We, therefore, recommend that a uniform duty of 10 per cent may be levied on all these products.

6.34 We also find that high grade raw ground sponge iron, an important input used

in the manufacture of iron powder is subject to duty at the rate of 90 per cent, while iron powder, the final product is taxed at 85 per cent. Iron powder is an important input in the engineering industry. We have separately recommended a duty rate of 20 per cent for general machinery. Iron powder being an input to engineering industry should be subject to import duty at the same level of 20 per cent or lower. We understand that the cost of high grade raw sponge iron forms an important portion of the total cost of iron powder. We suggest that the import duty on raw sponge iron be lowered to 10 per cent to bring it on par with the duty rate applicable to other sponge iron. The import duty rate on iron powder may be gradually brought down to 20 per cent by 1997-98.

6.35 Iron ore pellets which are used as input to the manufacture of sponge iron is subjected to import duty at the rate of 35 per cent. We have recommended an import duty of 10 per cent on sponge iron. Iron ore pellets being an input in the manufacture of sponge iron should be taxed at the same or lower rate. We have already indicated an import duty of 10 per cent on sponge iron, a basic input for mini steel plants. We, therefore, recommend that import duty on iron ore pellets should be reduced to 10 per cent.

6.36 Ferro Alloys are required as an essential raw material by the steel industry, especially in the production of alloy and special steel. The rate of import duty on ferro nickel is 50 per cent and on ferro-molybdenum 45 per cent, while the other ferro alloys are generally taxed at 105 per cent. We find that domestic prices of a number of ferro-alloys are competitive with international prices (Table 6.13). We do not see any reason for having varying duty rates for ferro alloys ranging from 45 per cent 105 per cent. We would recommend that the rate should be reduced to a level of 15 per cent by 1997-98. Tungsten ore concentrate, an input in the manufacture of ferro alloys is at present subject to import duty at the rate of 75 per cent which may be gradually lowered to 10 per cent. Molybdenum oxide and vanadium

pentoxide, the other two inputs, are subject to import duty at the rate of 95 per cent. We have separately recommended reduction of import duty on inorganic chemicals to 20 per cent. These steps will considerably lower the cost disadvantage in the production of ferro alloys.

6.37 The import duty changes recommended in the foregoing paragraphs should help the domestic iron and steel industry in minimising the cost disadvantages and becoming competitive.

6.38 The import duty on pig iron, an input for the engineering industry, is 30 per cent. We have separately recommended a duty rate of 20 per cent on general machinery and parts thereof. Pig iron being an important input for the engineering industry, we recommend that the import duty on it be reduced to 15 per cent by 1997-98.

6.39 The present duty rate is 45 per cent for semi-finished steel and 105 per cent for non-flat products like bars and rods and structurals and 85 per cent for railway material. In the category of flat products, tariff on plates is Rs.3000 per tonne plus 45 per cent ad valorem. For all these products, we find no reason for keeping such a high tariff barrier. We recommend that the import duty on these products should be brought down to a uniform level of 20 per cent by 1997-98. Even this rate provides sufficient protection to the domestic industry. This rate can be further lowered later without hurting the interest of the domestic industry.

6.40 We would like to reiterate that keeping import duty at rates higher than what is required to protect the domestic industry leads to undesirable consequences in other segments of the industry. To illustrate the point, the import duty rate on H.R.Coils is higher than the protective requirement of the domestic H.R.Coil industry. However, H.R.Coils of particular specifications are not produced in the country and are, therefore, imported for the manufacture of C.R.Coils for special applications. A rate of duty higher

than the protective requirement of the H.R.Coil industry does not help the domestic H.R.Coil industry but leads to cost disadvantages and inefficient indigenous production of C.R.Coils of special specifications.

6.41 The flat products (other than plates, which have been discussed earlier) like H.R.Coil/Sheets, C.R.Coil/Sheets, GP/G.C. Sheets, TMBP, tin sheets and electrical steel sheets are higher value added products. We find that at present there is a sharp escalation in the duty rates as the degree of processing increases. For example, the differential in the duty rates between H.R. and C.R.Coil and the differential between TMBP and tin plate is 35 percentage points. We have already suggested in our Interim Report (Para 8.22) that there should not be a marked escalation in the tariff rate with the degree of processing. We are of the view that the rate differentials between different stages of processing should be gradually narrowed and finally abolished in the case of flat products. The domestic manufacturers in any case get the additional protection as the protective duty is charged on the value added product which includes not only the value of inputs but also the value addition. We therefore, do not see any reason to provide higher duty rates for these products. General gradual reduction in duty on inputs and machinery will also help in reducing the capital cost, interest burden, etc. We also find these differentials are being maintained for the last decade. The exchange rate depreciation in this period will alone justify substantial reduction in differentials. Further, iron and steel being the most basic input for engineering and other sectors, higher prices of such products lead to distortions in the whole economy. We, therefore, recommend gradual reduction in duty rates as well as differentials at different stages of processing so that by the end of 1997-98, import duty on all these products are brought down to 20 per cent.

6.42 We would urge that the iron and steel industry should take appropriate steps to

ensure that all the products - upstream as well as downstream - are produced with the highest efficiency so that the whole of the economy benefits. We have advantages relating to the most basic input, iron ore. In case certain products of particular grade or specification, cannot be immediately produced at competitive rates due to certain constraints, we should stop producing such items. High tariff barrier to protect such segments leads to inefficiency in all other segments.

6.43 Articles of iron and steel are now subject to import duty at the rates varying between 85 per cent and 110 per cent. These articles provide basic input for various key sectors like railways, power and engineering industries. We, therefore, suggest that import duty on these articles may be gradually reduced to 30 per cent by 1997-98.

6.44 In the case of stainless steel, the facility for hot rolling at the Salem steel plant is expected to become operational around 1995. As of now, slabs manufactured at the Alloy Steel Plant, Durgapur, are sent abroad for hot-rolling and the HR product is imported for cold-rolling at Salem Steel Plant. The rate of import duty is 80 per cent of the freight both ways and of the conversion charges. The objective of this duty structure is difficult to fathom. It can only do harm and no good. The rate of duty, in this case should be lowered to 20 per cent as early as possible. Stainless steel is a basic input for capital goods and machinery. We have also recommended 15 per cent duty on nickel. Nickel being an important input in the manufacture of stainless steel, this should help in reducing the cost of production of stainless steel. We have separately recommended lowering the duty rates on capital goods to 20 per cent. Keeping in view these recommendations, we would urge that the duty rates on stainless steel be brought down to the 20 per cent level. Similarly, duty rates on other alloy steel should also be gradually lowered to 20 per cent to be in line with duty rates on other metals.

6.45 The I.P.R. Scheme was introduced in 1981 to make iron and steel based engineering exports internationally competitive. The scheme makes available iron and steel to engineering exporters at international prices by reimbursing the difference between the domestic and international prices of iron and steel. The expenditure incurred on reimbursements is met out of Engineering Goods Export Assistance Fund (EGEAF) created through a levy on pig iron and steel manufactured by the main producers only. At present, the EGEAF levy is Rs.300 per tonne on steel and Rs.113 per tonne on pig iron. A very small portion of the pig iron and steel produced in the country is used in the manufacture of engineering goods for export. We do not find any justification for making the domestic consumers bear a levy to support the export of engineering goods. In any case, exporters can import their requirements of iron and steel at international prices under the advance licencing scheme. Also steel prices would come down near international levels if our recommendations are implemented. EGEAF levy is not applicable on imports and is, therefore, a price disadvantage for the domestically produced iron and steel¹¹. We recommend the abolition of this levy. The expenses of I.P.R. should be met out of the general budget.

6.46 The Steel Development Fund (SDF) was introduced in 1978 by allowing the Joint Plant Committee (JPC) to add an 'element' on the ex-works prices of the main producers. The SDF levy is on all the items of steel produced by the integrated steel plants only. SDF is utilised for financing projects of the iron and steel industry relating to modernisation, research and development, diversification, addition to capacity, etc. SDF levy varies between Rs.350 and Rs.500 per tonne. This levy was introduced when the prices of iron and steel were regulated and the producers were not free to price their products as per market forces. With the abolition of the price and distribution regulations, producers of iron and steel are

free to decide the prices like producers of any other commodity. In the present arrangement, the SDF levy does not form part of assessable value for collection of excise duty and, therefore, Government is deprived of the excise duty corresponding to the SDF levy. Secondly, the amount of SDF levy collected does not form part of the profits of the producers. The SDF levy thereby creates distortions in the collection of both direct and indirect taxes. The SDF levy is not applicable on imported iron and steel, which also leads to distortion in price competitiveness. We, therefore, recommend the abolition of SDF levy. The producers are free to set up a fund out of their post-tax profits to finance research.

different items related to the iron and steel industry to be brought about by 1997-98 are as follows:

Coking coal	5 per cent
Non-coking coal and coke with low phosphorous content	10 per cent
Refractories	15 per cent
Input material for refractories	10 per cent
Iron ore pellets	10 per cent
Sponge iron/H.B.I., steel scrap	10 per cent
Ferro alloys	15 per cent
Pig iron	15 per cent
Semis and finished steel	20 per cent
Stainless steel and other alloy steel	20 per cent
Articles of iron and steel	30 per cent

6.47 To sum-up, our recommendations regarding the levels of import duty on



TABLE 6.1

Product Mix of Indian Steel Industry

(Production in '000 tonnes)

S.No. Item	Year				Per cent			
	1987	1988	1989	1990	1987	1988	1989	1990
1. Pig Iron:								
(i) Integrated steel plant	1170	1003	1236	1394	91	89	92	92
(ii) Mini steel plants	121	124	114	120	9	11	8	8
Total	1291	1127	1350	1514	100	100	100	100
2. Saleable steel (Mild):								
(i) Integrated steel plants	8589	9205	9029	9346	71	72	70	69
(ii) Mini steel plants	2763	2706	2777	3059	23	21	22	23
3. Tool and Alloy Steels (including stainless steel)	770	834	1008	1068	6	7	8	8
Total 2 and 3	12121	12745	12813	13473	100	100	100	100

Source: Steel Authority of India Limited, (1992), **Statistics for Iron and Steel Industry in India**, p.8,9,10,11,26,61.

TABLE 6.2

**Production of Mini Steel Plants and Secondary Producers -
All India Summary 1986-87 to 1991-92**

(in '000 tonnes)

Unit/category	1986-87	1987-88	1988-89	1989-90	1990-91
Electric Furnace Unit					
Mild steel	2193.7	2370.1	2214.6	2368.3	2667.5
Medium/high carbon Steel	346.8	392.8	491.4	408.8	392.0
Alloy steel	537.5	432.6	511.7	545.3	628.4
Stainless steel	-	114.9	128.0	155.7	179.6
Total =>	3078.0	3310.4	3345.7	3478.1	3867.5
Liquid metal for castings	220.8	198.9	398.9	364.7	350.4
Re-Rollers					
Slabs/plates	12.3	7.5	32.4	45.6	111.7
Squares	-	145.7	138.9	151.4	199.3
Bars/rods	2189.1	2020.6	1928.2	1933.6	1922.4
Wire rods	542.7	547.1	544.3	506.0	634.5
Structurals	845.3	910.5	767.8	769.2	743.8
Hoops	25.2	21.5	6.7	2.1	1.2
Special sections	190.7	84.4	99.4	130.2	41.2
Total =>	3805.3	5505.8*	5441.5*	5821.0*	5494.8*
Cold Rolling Units					
Mild steel	218.9	310.0	464.3	557.2	547.5
Medium carbon steel	9.0	7.5	12.0	14.2	13.2
High carbon steel	7.8	8.2	10.1	8.1	6.8
Alloy steels	0.8	0.6	1.6	0.9	0.4
Stainless steel	16.0	12.5	6.9	3.4	5.9
Total =>	252.5	338.8	494.9	583.8	573.8

contd.....

TABLE 6.2 (contd.)

Unit/category	1986-87	1987-88	1988-89	1989-90	1990-91
Wire Drawing Units					
Mild steel	256.5	251.1*	229.3*	223.2	197.4
Medium/high carbon Steel	154.7	156.0*	168.8*	190.8	166.9
Alloy steels	7.7	8.0	8.6	6.9	9.9
Stainless steel	1.5	3.2	1.5	1.2	2.3
Total ==>	420.4	418.3*	408.2*	422.1	376.5
Tin Plates					
Oil can size	53.3	45.8	45.3	44.7	46.0
Non oil can size	23.0	15.1	33.1	26.9	15.4
Total ==>	76.3	60.9	78.4	71.6	61.4

Notes: Data relate to units registered with Iron & Steel Controller and which have reported production. Production of main producers is not included.

* Including estimated production of non-reported units during the period.

Source: Steel Authority of India Limited (1992), **Statistics for Iron and Steel Industry in India**, p.75.

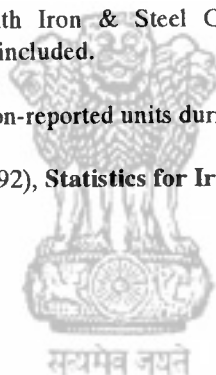


TABLE 6.3

Production of Sponge Iron

(In lakh tonnes)

S. No.	Name of the unit	Installed capacity	Production during 1990-91	Production during 1991-92 (April-November)
A. Coal Based				
1.	Sponge Iron India Limited	0.6	0.47	0.30
2.	Orissa Sponge Iron Limited	1.5	0.80	0.64
3.	IPITATA Sponge Iron Limited	1.2	0.62	0.54
4.	Bihar Sponge Iron Limited	1.2	1.12	0.85
5.	Sunflag Iron & Steel Co.Ltd.	1.5	0.79	0.56
	Sub-total (Coal-based)	6.0	3.80	2.89
B. Gas-based				
6.	Essar Gujrat Ltd.	8.0	4.50	4.97
	Total (A+B)	14.0	8.30	7.86

Source: Ministry of Steel, Annual Report 1991-92, p.6.

TABLE 6.4
Availability of Iron and Steel

(in '000 tonnes)

Category		1987-88			1988-89		
		P	I	E	P	I	E
I.	A. Pig iron	1291.1	34.1		1127.8	164.4	
II.	Steel						
B.	Re-rollable materials	4515.9	170.6		450.1	107.4	
C.	Finished steel						
1.	Bars and rods	4525.8	38.4		5016.8	26.6	22.0
2.	Structurals	1640.2	54.4		1580.7	23.5	
3.	Plates	1120.1	114.2	42.6	1359.1	117.2	96.7
4.	Hot rolled coils/ Skelp	1455.9	173.4		1534.5	330.1	
5.	Hot rolled sheets	366.6	78.3		399.2	49.9	
6.	Cold rolled sheets	848.8	451.6		1117.0	455.2	
7.	Galvanised plain/ Corrugated sheets	312.2	19.9		410.3	5.6	
8.	Electrical steel sheets	78.2	65.7		83.0	68.1	
9.	Tin plates	124.0	147.6		154.4	186.1	
10.	Pipes	79.2			85.6		
11.	Railway materials	530.8	227.7		603.4	173.8	
	Total II	15597.7	1541.8	42.6	12794.1	1543.5	118.7

Category		1989-90			1990-91		
		P	I	E	P	I	E
I.	A. Pig iron	1350.1	356.2		1514.0	188.9	
II.	Steel						
B.	Re-rollable materials	4488.6	46.0		5209.6	27.1	
C.	Finished steel						
1.	Bars and rods	5102.3	25.8	80.8	5683.9	53.7	
2.	Structurals	1762.0	12.4		1792.9	13.8	
3.	Plates	1456.7	125.1	164.6	1664.6	125.7	183.4
4.	Hot rolled coils/ Skelp	1485.2	269.9		2054.4	398.3	
5.	Hot rolled sheets	327.3	75.6		353.7	83.0	
6.	Cold rolled sheets	1274.3	380.1		1305.7	244.5	
7.	Galvanised plain/ Corrugated sheets	399.1	1.4		449.5	1.3	
8.	Electrical steel sheets	72.5	95.1		105.5	57.1	
9.	Tin plates	108.0	172.8		182.1	67.9	
10.	Pipes	80.7		109.6	86.3		
11.	Railway materials	562.6	141.3		561.7	38.5	
	Total II	17119.3	1345.5	245.4	19473.2	1197.2	183.4

Notes: P = Production; I = Imports; and E = Exports.

Source: Steel Authority of India Limited (1992), **Statistics for Iron and Steel Industry in India**, p.p.8-11.

TABLE 6.5

Import of Iron and Steel

(Qty : '000 tonnes/Value : Rs. crore)

Category	Quantity				Value			
	1988 -89	1989 -90	1990 -91	1991 -92	1988 -89	1989 -90	1990 -91	1991 -92
I. Saleable steel								
A. Semis	30.1	9.5	27.1	28.9	13.5	0.2	18.1	23.6
B. Finished steel								
1. Non-flat products								
Bars and rods	66.4	59.6	53.7	39.4	83.7	99.2	98.0	93.8
Structurals	23.5	12.4	13.8	2.9	16.2	12.8	13.7	3.9
Rly. materials	173.8	132.8	38.5	113.9	108.4	107.4	64.6	185.2
Total (1) Non-flat products	263.7	204.8	106.0	156.2	208.3	219.4	176.2	282.9
2. Flat products								
Plates	127.2	140.5	125.7	76.9	103.5	162.6	178.2	114.0
HR sheets	50.4	88.4	83.0	39.2	41.3	87.7	90.3	53.1
HR coil/skelp/strips	370.3	304.0	398.3	301.3	323.5	309.7	337.9	301.4
CR coils/sheets	460.4	383.9	244.5	143.6	341.8	386.0	257.4	194.6
GP/GC sheets	5.6	1.4	1.3	2.1	3.6	1.8	1.7	4.4
Elect. sheets	68.1	95.0	57.1	46.0	111.2	181.0	119.6	118.5
TNBP	163.2	74.7	64.7	70.3	141.4	82.7	66.7	80.8
Tin plates	51.5	36.7	67.9	57.2	47.0	43.7	72.4	82.0
Tin plates W/W	107.9	115.1	98.7	95.3	70.7	76.3	77.4	98.0
Tin free steel	26.7	20.9	6.7	6.8	14.5	11.4	3.8	5.5
Total (2) flat products	1431.3	1255.6	1147.9	838.7	1198.5	1342.9	1205.5	1052.4
Total (1+2) finished steel	1695.0	1460.4	1253.9	994.9	1406.8	1562.3	1381.7	1335.3
Total saleable steel (A+B)	1725.1	1469.9	1281.0	1023.8	1420.4	157.5	1399.8	1358.9
II. Other steel items								
Pipes and fittings	208.9	206.9	197.6	105.6	250.6	433.9	394.6	332.2
Misc. steel items	59.6	56.2	74.7	47.8	158.9	211.1	205.3	172.2
Steel scrap	2055.2	2243.3	2821.5	1268.0	494.6	703.1	859.4	479.7
III. Iron								
Pig iron	164.4	356.2	188.9	152.4	37.9	112.6	62.3	57.8
Sponge iron	1.2	2.2	1.4	1.6	0.8	1.6	1.1	1.5
H.B. iron	156.2	164.1	57.1	4.7	37.6	47.0	16.5	1.6
IV. Ferro alloys			17.4	12.5			104.8	113.4
GRAND TOTAL	4370.6	4500.8	4688.6	2616.4	2400.8	3081.9	3079.9	2517.3

Source: Ministry of Steel.

TABLE 6.6
Crude Steel Production by Different Process - 1990

Country	Quantity - thousand tonnes					Percentage of total			
	Oxygen	Electric	Open	Other	Total	Oxygen	Electric	Open	Other
		arc	hearth				arc		hearth
Belgium	10374	1041	-	-	11414	90.9	9.1	0.0	0.0
France	13614	5401	-	-	19015	71.6	28.4	0.0	0.0
Germany*	31328	7106	-	-	38434	81.5	18.5	0.0	0.0
Italy	11200	14310	-	-	25510	43.9	56.1	0.0	0.0
Spain	5593	7342	-	-	12935	43.2	56.8	0.0	0.0
United Kingdom	13169	4672	-	-	17841	73.8	26.2	0.0	0.0
Canada	7773	4508	-	-	12281	63.3	36.7	0.0	0.0
United States	53028	32701	3171	-	88900	59.6	36.8	3.6	0.0
Japan	75640	34691	-	-	110331	68.6	31.4	0.0	0.0
Brazil	15214	4896	-	457	20567	74.0	23.8	0.0	2.2
India	6173	4114	4976	-	14963	41.3	27.5	31.3	0.0
Taiwan (R.O.C.)	5627	4042	-	78	9747	57.7	41.5	0.0	0.8
Czechoslovakia	7102	1958	5817	-	14877	47.7	13.2	39.1	0.0
Poland	7211	2455	3965	2	13633	52.9	18.0	29.1	0.0
USSR (erstwhile)	54365	20130	79846	73	154414	35.2	13.0	51.7	0.0

* Excluding erstwhile GDR.

Source: Steel Authority of India Limited (1992), Statistics for Iron and Steel Industry in India, p.413.

TABLE 6.7**Labour Productivity in Steel Industry in
Selected Countries 1985 to 1989****(Tonne per man-year)**

Country	1985	1986	1987	1988	1989
Belgium	306	313	338	400	389
France	247	263	305	360	386
Germany*	268	259	272	313	316
Italy	351	347	362	402	435
Spain	212	235	251	290	328
United Kingdom	266	258	316	345	346
Canada	304	307	306	226	239
U.S.A.	289	422	334	425	429
Japan	289	289	308	345	351
Brazil	141	146	153	158	142
India	40	42	45	48	50

* Excluding erstwhile GDR.

Source: Steel Authority of India Limited, (1992) **Statistics for Iron and Steel Industry in India**, p.433.

TABLE 6.8
Cost of Production in the Various Stages
of Steel Production

(\$ per tonne)

Country	Hot metal	Liquid steel	Saleable steel
USA	169	235	500
UK	214	224	470
Japan	161	213	509
West Germany	180	253	543
SAIL	157	282	493

Sources: 1. **World Steel Dynamics**, February 1992.
2. **SAIL**.



TABLE 6.9**Break-Up of Cost of Production of Saleable Steel**

(\$ per tonne)

Components\Country	USA	UK	Japan	West Germany	SAIL
Energy	106	87	97	102	148
Iron ore	65	75	68	64	22
Fluxes and alloys	32	37	30	34	32
Refractories and rolls	23	24	20	19	24
Others	91	94	75	88	90
Total material cost	317	317	290	307	316
Labour	143	121	129	165	65
Misc.taxes	7	10	9	10	47
Works cost	467	448	428	482	428
Depreciation on interest	33	22	81	61	65
Total cost	500	470	509	543	493

Sources:

1. **World Steel Dynamics**, February, 1992.
2. **SAIL.**

TABLE 6.10

Domestic and International Price: Trends

(Rs./tonne)

Items/years	1988-89		Impli- cit tariff	1989-90		Impli cit tariff	1990-91		Impli cit tariff	1991-92		Imp- licit tariff
	SYPR	cif		SYPR	cif		SYPR	cif		SYPR	cif	
1.Pig iron	3702	2661	1.39	4060	3286	1.24	4272	3347	1.28	4519	4349	1.04
2.Semis	5818	4522	1.29	6085	5066	1.20	6325	4996	1.27	6645	6677	1.00
3.Bars and rods	6806	4943	1.38	7265	5743	1.27	7797	6067	1.29	8510	8152	1.04
4.Structurals	7835	6526	1.20	8143	7798	1.04	8466	8351	1.01	8967	11071	0.81
5.Plates	10162	7813	1.30	11016	8685	1.27	11495	8755	1.31	12871	12209	1.05
6.H.R.coils	10250	6908	1.48	11425	7811	1.46	12107	7930	1.53	13202	10141	1.30
7.C.R.coils	13211	9401	1.41	14661	10087	1.45	15962	9749	1.64	17721	11514	1.54
8.G.P.sheets	18995	10636	1.79	21140	13176	1.60	21500	13919	1.54	23200	14897	1.56
9.Tin plate	15640	12743	1.23	15640	14810	1.06	15640	14824	1.06	27045	18470	1.46

Note: SYPR = Stockyard Price
 cif = Cost, Insurance & Freight.
 Implicit Tariff = Domestic Price/International Price

Source: Joint Plant Committee.



TABLE 6.11

**Import Duty Rates on Iron and Steel Products
(1987-88 to 1991-92)**

	1987-88	1988-89	1989-90	1990-91 April '90	1990-91 Dec. '90	1991-92 July '91
1. Scrap	20%	25%	25%	25%	45%	35%
2. Pig iron	65%	85%	35%	45%	65%	55%
3. Semis	55%	60%	60%	60%	65%	60%
4. HR coil/sheets	Rs.2500/ t+65%	Rs.1100/ t+55%	Rs.1100/ t+60%	Rs.1100/ t+60%	Rs.1100/ t+65%	Rs.1100/ t+65%
5. CR (coils)	85%	Rs.5000/ t+45%	Rs.6600/ t+30%	Rs.6600/ t+30%	Rs.6600/ t+50%	Rs.6600/ t+40%
6. GP/GC sheet	Rs.3500/ t+100%	Rs.8200/ t+45%	Rs.7000/ t+125%	Rs.7000/ t+125%	Rs.7000/ t+130%	Rs.7000/ t+130%
7. Electrical steel sheets	190%	90%	90%	100%	110%	110%
8. Tin plate	Rs.2500/ t+65%	Rs.5000/ t+45%	Rs.5000/ t+45%	80%	85%	85%
9. Stainless steel - HR coils	90%	95%	95%	100%	105%	
10. General rate for stainless steel	340%	345%	345%	200%	150%	

Source: Customs Tariff Working Schedule.

TABLE 6.12

Duty Rates on Raw Materials

			1992-93 (%)
1.	a)	Coking coal of ash content below 12%	5
	b)	Other Coal	85
2.	a)	Low Phos Coke with phosphorous content below 0.05% for manufacture of pig iron.	25
	b)	Other coke	85
4.		Dead Burnt Magnesite	70
5.		Fused magnesia	70
6.		Chromite Ore	70
7.		Magnesia - chrome sinters	70
8.		Magnesia - lime sinters	70
9.		Magnesia - alumina sinters	70
10.		Ferro-Molybdenum	45
11.		Ferro Nickel	50
12.		Ferro alloys (excluding ferro-molybdenum and ferro-nickel)	105
13.		Refractory bricks for use in industrial furnaces	40

Source: Customs Tariff Working Schedule.

TABLE 6.13

Price Comparison of Major Inputs in Alloy Steel Plants in 1991-92

(Rs. per kg.)

	Items	Domestic price (1)	International price (2)	Col. (2)/Col. (3) (3)
1.	Ferro vanadium	333	282	1.18
2.	Ferro manganese	15	12	1.25
3.	Ferro silicon	29	39	0.74
4.	Ferro molybdenum	220	151	1.46
5.	Ferro chrome	30	24	1.25
6.	Silica manganese			
	Ferro alloys	18	13	1.38
	Ferro nickel			

Source: Steel Authority of India Limited, London Metal Bulletin, SAIL (December).



NON-FERROUS METALS

7.1 The most important non-ferrous metals used in industrial applications are aluminium, nickel, tin, copper, zinc and lead. Out of these metals, aluminium is produced in the country in quantities sufficient to meet almost the entire domestic requirement, though some quantities of aluminium alloys and articles of aluminium continue to be imported. Of the remaining non-ferrous metals, copper, zinc and lead are also produced in the country but they meet the domestic requirement only partially and the balance requirement is met through imports. Nickel is not produced in the country and the entire requirement is met through imports. Tin also is mostly imported.

Imports

7.2 The value of import of non-ferrous metals and articles made therefrom comprising aluminium, copper, zinc, lead, nickel and tin was of the order of Rs.1,428 crore, forming 3.3 per cent of the total value of imports of Rs.43,193 crore in 1990-91. Out of the value of imports of all non-ferrous metals in 1990-91, that of copper alone was about 58 per cent. The value of import of zinc and lead formed about 20 per cent and that of nickel and tin was about 13 per cent. The import of aluminium accounted for about 9 per cent of the value of import of all non-ferrous metals.

Customs Revenue from Imports of Non-Ferrous Metals and Average Realised Rate of Import Duty

7.3 The customs revenue earned on the import of non-ferrous metals in 1990-91 was Rs.841 crore forming 4.1 per cent of the total customs revenue of Rs.20,308 crore collected on the imports of all commodities. Out of all the non-ferrous metals, copper yielded the highest customs revenue of Rs.505 crores. The average realised rate of import duty on

all non-ferrous metals taken together was 59 per cent of the import value in 1990-91.

7.4 Details of the imports, customs revenue on imports and realised rates of import duty for the different items of non-ferrous metals and/articles made therefrom (including scrap, waste, powder, alloys, plates, sheets, strips, foils, etc.) during the last few years are given in Tables 7.1 to 7.5.

Present Structure of Tariff Rates

7.5 The import duty rates (basic duty plus auxiliary duty) for the different items of non-ferrous primary metals from December, 1988 onwards are given in Table 7.6.

Comparative Duty Rates in Other Developing Countries

7.6 For purposes of comparison, the import duty rates on non-ferrous metals in some of the developing countries are given in Table 7.7.

7.7 In the following paragraphs, we discuss the important aspects which have a bearing on the rationalisation of the import duties on different items of non-ferrous metals.

Aluminium

7.8 The country's entire requirement of aluminium is almost fully met by indigenous production. The imports are negligible and selective. In fact, there are some exports of aluminium out of indigenous production. The imports of aluminium ingots and all articles of aluminium formed about 0.3 per cent of the total imports of all commodities in 1990-91. The customs revenue therefrom was about 0.2 per cent of the total customs revenue in 1990-91. Fortunately, India is

endowed with large bauxite deposits of the order of 2650 million tonnes placing the country fifth in rank in the world. Aluminium is produced by two companies in the public sector - Bharat Aluminium Company Limited (BALCO) and National Aluminium Company Limited (NALCO) - and three companies in the private sector - Indian Aluminium Company Limited (INDAL), Hindustan Aluminium Corporation Limited (HINDALCO) and Madras Aluminium Company Limited (MALCO). The total production of aluminium by all the producers was about 4.49 lakh tonnes in 1990-91 against a demand of 4.10 lakh tonnes. During 1991-92, the production is estimated at 5.21 lakh tonnes against the demand of 4.57 lakh tonnes.

7.9 In terms of cost, the domestic industry does not appear to suffer from any serious disadvantage when the domestic prices are compared with the prices prevailing in international markets. The domestic price (excluding excise) international price (cif) ratio during the last three years has been in the range of 1:1 to 1.2:1. The domestic price (excluding excise) international price ratio in October, 1992 was 1.07:1.

7.10 The import duty rate effective from March, 1992 for unwrought aluminium ingots is about 36 per cent ad valorem. The present general duty rate on articles of aluminium including aluminium alloys, plates, sheets, strips, etc., is 105/110 per cent.

7.11 As already stated, the domestic aluminium industry is in a fairly comfortable position and the domestic prices (excluding excise duty) for aluminium ingots are more or less at par with the international prices. Hence, a reduction in the duty level would not hurt the domestic industry.

7.12 Taking all the relevant factors into consideration, there is a case for bringing down substantially the duty rates both for aluminium ingots and articles of aluminium. We would recommend that the duty rate for

aluminium ingots be brought down from the present level of 36 per cent to 15 per cent by 1997-98. As regards articles of aluminium, the rate should be brought down gradually from the present general level of 105-110 per cent to 25 per cent by the same date.

Copper

7.13 Unlike in the case of aluminium, copper ore reserves are limited and the copper content in the ore is also very poor. As compared to the world copper reserves of over 525 million tonnes, the copper reserves in India are estimated at 6.3 million tonnes only. The metal content in the copper ore in India is on an average about 1.30 per cent, while the metal content in the copper ore in some of the African countries is as high as 3 to 4 per cent.

7.14 The demand for copper in India is at present around 1.80 lakh tonnes, forming roughly about 2 per cent of the annual world consumption. By the turn of the century it is likely to be 2.92 lakh tonnes. The demand for copper in the country is met at present partly by indigenous production and largely by imports - to the extent of 65 to 70 per cent. Given our limited resources, copper would continue to be imported in the years to come in one form or the other and the quantum of imports is expected to increase.

7.15 Hindustan Copper Limited (HCL), a company in the public sector, is the sole producer of primary copper in the country. Until February 1992, the import of copper in the unwrought primary form of cathodes and wire bars was being made by the Minerals and Metals Trading Corporation (MMTC), again a company in the public sector, which was the canalising agency for imports. The domestic prices for copper wire bars and wire rods were being fixed by the Government of India on the basis of the landed cost of imports by MMTC after adding the various costs incurred by the MMTC and a service margin. Since last year, after the copper import was decanalised, the imports are also being made by various traders and users.

7.16 Following the decanalisation of copper imports, the ratio between domestic price and international price has been showing a declining trend as would be evident from the figures given below:

Period	Ratio
1989-90	1.6
1990-91	1.6
Apr-Dec, 1991	1.7
October 1992	1.5

7.17 The total import of copper and articles thereof by all the agencies including MMTC during 1990-91 was 1.92 lakh tonnes valued at Rs.824 crore.

7.18 The indigenous production of copper by HCL in the form of cathodes, wire bars and also wire rods (including those produced indigenously and also smelted from abroad) had risen from 56,000 tonnes in 1989-90 to 67,000 tonnes in 1990-91 but has gone down to 60,000 tonnes in 1991-92. The scope for any substantial increase in indigenous production appears to be limited due to depleting ore reserves and the poor quality of ore, in spite of certain measures taken by HCL for expansion and modernisation of technology. One possible way to increase domestic production would be to import copper concentrate for further processing.

7.19 The rate of import duty effective from March, 1992 and currently in force for copper wire bars and cathodes is about 56 per cent.

7.20 The cost of production of wire bars for April-December, 1991 was furnished by the HCL. The production cost for 1990-91 was also calculated from the published accounts of HCL for that year. After making necessary adjustments for the recovery of by-products and after providing for the escalation in costs for the 1992-93 level, the total cost of production (excluding interest and excise duty) as at present was estimated

at Rs.84,700 per tonne. After providing for interest on the working capital as well as on the debt component of the net block and after allowing a fair return at 12 per cent post-tax on the equity component of the net block, the fair price for copper wire bars produced by HCL in 1992-93 is estimated at Rs.96,474 per tonne (excluding excise duty). The ratio between this fair price and the average cif price for April-September, 1992 works out to 1.18:1.

7.21 HCL has already undertaken certain expansion and modernisation programmes and the effect of these measures would be felt at least from the next year. The company should take further measures to improve its cost effectiveness by closing down the uneconomic underground mines, especially in the Eastern Sector, resorting to selective mining, meeting the deficit requirement of concentrates for the smelter in the Eastern Zone from the surplus production of concentrates in Central India, etc. There could also be scope for improvement in mine productivity. It is considered that with the adoption of the various suggestions for improvement, the cost of production of HCL can be further brought down.

7.22 Copper is an important metal which is used in various industries and various applications and a reduction in its price would go to reduce the prices for various industrial products and services. A large proportion of copper consumption in the country is being imported and this would continue in the years to come. The domestic industry has to become more cost effective to compete with the imports.

7.23 In these circumstances, we would recommend that the import duty for copper cathodes, wire bars, wire rods, etc., should be brought down gradually from the present level of 56 per cent to 20 per cent by 1997-98. In respect of the copper wire bars, cathodes and wire rods produced out of copper concentrates, copper reverts, copper spent anodes or anode slime sent abroad for toll smelting or toll processing, the duty rate

should be 20 per cent of the toll smelting or toll processing costs subject to the conditions under which this concession is being given at present. Regarding articles of copper, the duty should be reduced gradually from the present general rate of 110 per cent to 30 per cent by 1997-98.

Zinc

7.24 Zinc is used for galvanizing, alloy making and die-casting and in dry cells and chemical industries. Over 65 per cent of the consumption of zinc is in respect of the galvanizing industry itself. A new range of applications has been identified including zinc based alloys such as zinc-aluminium alloys, new coating alloys, coinage, chemicals, galvanized reinforcement of steel bars for RCC structures and galvanizing for car bodies.

7.25 The country has 167 million tonnes of economically viable ore reserves having 8.16 per cent zinc (along with lead). The consumption of zinc was 1.11 lakh tonnes in 1990-91. In 1991-92, the consumption was 1.09 lakh tonnes. The per capita consumption of zinc in India is one of the lowest in the world at 0.138 Kgs.

7.26 Zinc is produced in the country by Hindustan Zinc Limited (HZL), a company in the public sector and Binani Zinc Limited, a company in the private sector. The indigenous production of zinc by both the companies was 73,970 tonnes meeting 66 per cent of consumption in 1990-91. About 37,195 tonnes (29 per cent) of Zinc was imported during the year through MMTC. In 1991-92, the demand was met to the extent of 1,04,950 tonnes or 80 per cent by indigenous production. It is expected that during 1992-93, the demand for zinc would be 1.35 lakh tonnes and this would be fully met through indigenous production.

7.27 The present duty rate for zinc is Rs.5,700 per tonne plus 40 per cent equivalent to 57 per cent ad valorem.

7.28 The domestic price - international price ratio for zinc has been in the range of 1.55 to 1.75 for the last two years. In October, 1992, it was 1.54.

7.29 The average cost of production of zinc by HZL in 1990-91 (excluding interest on loans and excise duty) was Rs.39,556 per tonne. After providing for the escalation in costs for two years from 1990-91 to 1992-93, the cost of production of zinc (excluding interest and excise duty) during the current year is estimated at Rs.45,857 per tonne. Taking into account the interest on working capital and loans and a fair return at 12 per cent post-tax on the equity component of net block, the estimated fair price for zinc during the current year (excluding excise duty) would be Rs.57,874 per tonne.

7.30 Based on the average cif price for import in April-September, 92, the protective duty indicated for the domestic industry is about 22 per cent.

7.31 Having regard to all these factors, we would recommend that the import duty for unwrought Zinc be gradually brought down from the present level of 57 per cent to 20 per cent by 1997-98. For articles of zinc, the duty rate should be reduced to 30 per cent by 1997-98 from the present general level of 110 per cent.

Lead

7.32 The requirement of lead in the country is met both through indigenous production and imports. The country has 167 million tonnes of economically viable ore reserves containing 2.2 per cent lead (along with zinc). The per capita consumption of lead is very low at 0.083 Kg. In 1990-91, the indigenous production was 41,727 tonnes while the imports by MMTC were of the order of 15,600 tonnes. The indigenous production of lead increased to 53,400 tonnes in 1991-92. The estimated production for the current year is about 78,000 tonnes, which constitutes 95 per cent of the estimated demand. Primary lead is produced by HZL,

and secondary lead is produced by Indian Lead Limited in the private sector.

7.33 The present duty level in the case of lead is Rs.7,500 per tonne plus 50 per cent. This works out to about 94 per cent ad valorem.

7.34 The domestic price - international price ratio for the last two years has been ranging from 1.8 to 2.1. In October 1992, the ratio was 1.7.

7.35 The fair price for lead produced by HZL in 1992-93 (excluding excise duty) on the basis of the actual cost for 1990-91 and after providing for necessary escalation in costs, interest on working capital and loans and also a fair return at 12 per cent post-tax on the equity component of net block would be Rs.39,100 per tonne. Based on the average cif price for April-September, 92, the protective duty indicated is of the order of 73 per cent. However, the cost of production of lead by HZL was rather high in 1990-91, especially in its Vizag plant which produced about 68 per cent of the total lead production. The cost of lead produced in the Vizag plant was higher than the cost in Tundoo Plant by over 60 per cent. Even in Vizag Plant itself, the cost in 1990-91 was higher than the cost in the previous year by about 40 per cent. There appears to be scope for a substantial cost reduction by introducing necessary cost effective measures in the operations. The company should be in a position to bring down its cost in the next one or two years by adopting the necessary cost reduction steps.

7.36 In the light of the foregoing, we would recommend that the import duty for unwrought unalloyed lead be brought down gradually from the present level of 94 per cent to 20 per cent by 1997-98. The duty rate for all articles of lead should be brought down to 30 per cent from the present general level of 110 per cent.

Nickel

7.37 Nickel is not produced in the

country and is wholly imported to meet the internal requirements. The demand for nickel mainly arises from the manufacture of stainless steel and alloy steel products. Some quantities of nickel are also being used for electroplating the goods. The consumption of unwrought unalloyed nickel was of the order of 4571 tonnes in 1990-91. The value of imports of unwrought unalloyed nickel and also various articles of nickel - plates, sheets, etc., as also waste and scrap was about Rs.148 crore in 1990-91 forming about 0.3 per cent of the total value of all imports during the year. In terms of customs revenue, nickel imports contributed about 0.4 per cent of the total customs revenue.

7.38 The domestic price - international price ratio for nickel has been ranging from 1.7 to 1.9 during the last two years. At present, the ratio is 1.7. The import duty on nickel at present is 60 per cent.

7.39 It does not stand to reason why the duty rate should be kept at a high level of 60 per cent for nickel which is not produced in the country and when there is no protection angle for the domestic industry. In line with the general principles enunciated by us for rationalising the tariff rates, there is need to reduce the tariff rate substantially for nickel also. We would recommend that the duty for unwrought nickel be brought down to 15 per cent by 1997-98. For all articles of nickel, the duty level should be gradually reduced to 25 per cent from the existing general level of 85 to 110 per cent.

Tin

7.40 Like nickel, tin is also mostly imported. The consumption of tin in India is just about 2500 to 3000 tonnes. The tin consumption in India forms a negligible 0.1 per cent of the total world consumption. Tin is used for soldering and tin plating apart from use in the electrical industry. During 1990-91, the value of tin imports was about Rs.32 crore which formed about 0.07 per cent of the total value of imports.

7.41 The domestic price - international price ratio of tin during the last two years was about 1.9 and it increased to 2 in October, 1992. The current rate of duty on unwrought unalloyed tin is 85 per cent.

7.42 As in the case of nickel, there is no ground for levying a high level of import duty on tin when it is mostly imported. Considering this fact and also that the import of tin is rather insignificant, we would recommend that the import duty for unwrought unalloyed tin be reduced to 15 per cent by 1997-98 in stages from the present level of 85 per cent. For all articles of tin, the duty rate should be fixed at 25 per cent by 1997-98 against the present general rate of 85 to 105 per cent.

Duty on Ores, Concentrates, Waste, Scrap, etc.

7.43 In the present duty structure, varying rates of import duty are applicable to ores, concentrates, dross, ash, residue, etc., in the case of the different non-ferrous metals. These are classified under Chapter 26 of the Customs Tariff. The rates of duty vary from 15 per cent for zinc concentrate to 105 per cent for aluminium ash and residues (including dross). Waste and scrap of non-ferrous metals are classified under the respective chapters from 74 to 80 and the rates of duty are different in the case of different non-ferrous metals. For copper waste and scrap, the duty rate is Rs.10,500 per tonne plus 40 per cent ad valorem. The duty rate is 50 per cent for the waste and scrap of aluminium and 85 per cent for the waste and scrap of nickel. For tin waste and scrap, the duty rate is 105 per cent and it is 110 per cent in the case of zinc and lead.

7.44 Ores, concentrates, dross, ash, residue, etc., are basic raw materials and it is necessary to keep the duty rates on them as low as possible. Similarly, in the present context of limited ore reserves in the country, it would be worthwhile to use more of waste,

scrap, concentrates, etc., for the manufacture of the metals and articles thereof not only by recycling but also through larger imports of these materials. There would be substantial savings in energy cost in the manufacture of metals and articles therefrom out of waste, scrap, concentrates, etc., and the cost of the metal and articles would get reduced. In view of these reasons, it would be necessary to have a low rate of duty for these items. We would recommend that the duty rate for ores, concentrate, dross, ash, residue, mill scale, waste and scrap of all non-ferrous metals be fixed uniformly at 10 per cent ad valorem by 1997-98.

7.45 To summarise, we recommend that the import duty for the various non-ferrous metals be brought down gradually to the following levels by 1997-98:

1. Unwrought aluminium, 15 per cent
nickel and tin
2. Unwrought copper, 20 per cent
lead and zinc
3. Articles of aluminium, 25 per cent
nickel and tin
4. Articles of copper, 30 per cent
lead and zinc
5. Ores, concentrates, 10 per cent
dross, ash, residue,
mill scale, waste and
scrap of non-ferrous
metals

7.46 The rates recommended in the case of copper, zinc and lead are higher than those prevailing in other developing countries. We would suggest that import tariff in the case of these metals should be brought down in due course to the levels suggested for the other non-ferrous metals so that there is a uniform levy of 15 per cent for the metals and 25 per cent for the metals articles.

TABLE 7.1**Import of Non-Ferrous Metals and Articles in
Relation to Total Import of All Commodities**

	(Rs.crore)		
	1988-89	1989-90	1990-91
Import of non-ferrous metals and articles thereof	947 (3.5)	1520 (4.3)	1428 (3.3)
Import of all other commodities	27288 (96.5)	33896 (95.7)	41765 (96.7)
Total	28235 (100.0)	35416 (100.0)	43193 (100.0)

Note : Figures in brackets are percentages of total.

Source : D.G.C.I.S., Government of India, **Foreign Trade Statistics.**



TABLE 7.2

**Customs Revenue on Import of Non-Ferrous Metals and Articles
in Relation to Total Customs Revenue on
Imports of All Commodities**

(Rs. crore)

	1988-89	1989-90	1990-91	1991-92 (RE)	1992-93 (BE)
Non-ferrous metals and articles thereof	801 (5.2)	838 (4.7)	841 (4.1)	717 (3.3)	963 (3.4)
All other commodities	14745 (94.8)	16837 (95.3)	19467 (95.9)	21139 (96.7)	25736 (96.6)
Total	15546 (100.0)	17675 (100.0)	20308 (100.0)	21856 (100.0)	26699 (100.00)

Note : Figures in brackets are percentages of total.

Source: Receipts Budget, Government of India.



TABLE 7.3**Import of Different Non-Ferrous Metals and
Articles Made Therefrom**

(Rs.crore)

	1989-90	1989-90	1990-91
Aluminium	82.67 (8.7)	256.58 (16.9)	128.65 (9.0)
Copper	480.79 (50.8)	740.55 (48.7)	824.13 (57.8)
Zinc	133.46 (14.1)	229.23 (15.1)	226.20 (15.8)
Lead	42.83 (4.5)	70.10 (4.6)	69.18 (4.8)
Nickel	174.43 (18.4)	191.95 (12.6)	147.66 (10.3)
Tin	32.94 (3.5)	31.38 (2.1)	32.34 (2.3)
Total	947.12 (100.0)	1519.69 (100.0)	1428.16 (100.0)

Note : Figures in brackets are percentages of total.

Source: D.G.C.I.S., Government of India, Foreign Trade Statistics.

TABLE 7.4

**Customs Revenue on Import of Different Non-Ferrous
Metals and Articles Made Therefrom**

(Rs. crores)

	1988-89	1989-90	1990-91	1991-92 (RE)	1991-92 (BE)
Aluminium	36.02 (4.5)	83.04 (9.9)	48.10 (5.7)	40.00 (5.6)	46.00 (4.8)
Copper	431.25 (53.8)	439.13 (52.4)	504.89 (60.0)	410.00 (57.2)	665.90 (69.1)
Zinc	155.82 (53.8)	122.35 (14.6)	136.57 (16.3)	100.00 (13.9)	71.75 (7.4)
Lead	46.18 (5.8)	48.72 (5.8)	39.13 (4.7)	32.00 (4.5)	15.40 (1.6)
Nickel	99.26 (12.4)	112.34 (13.4)	83.99 (10.0)	110.00 (15.3)	122.95 (12.8)
Tin	32.48 (4.0)	32.74 (3.9)	28.24 (3.3)	25.00 (3.5)	41.00 (4.3)
Total	801.01 (100.0)	838.32 (100.0)	841.00 (100.0)	717.00 (100.0)	963.00 (100.0)

Note: Figures in parentheses are percentages of total.

Source: Receipts Budget, Government of India.

TABLE 7.5**Realised Rates of Import Duty on Different
Non-Ferrous Metals and Articles
Made Therefrom****(per cent)**

	1988-89	1989-90	1990-91
Aluminium	44	33	37
Copper	90	59	61
Zinc	117	53	60
Lead	108	69	57
Nickel	57	58	57
Tin	99	104	87
Weighted average	85	55	59

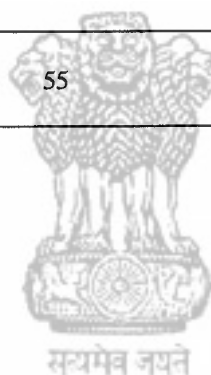


TABLE 7.6

Import Duty Rates on Non-Ferrous Metals Since December 1988

	Unwrought aluminium ingot	Unwrought copper wire bars, cathods and sections of cathods	Unwrought zinc	Unwrought unalloyed lead	Unwrought unalloyed nickel	Unwro ought unalloy- ed tin
12-12-88/23-12-88	Rs.500/MT +5%	Rs.10500/MT +30%	Rs.5700/MT +30%	Rs.7500/MT +45%	Rs.35000/MT +45%	85%
1.3.1989	NIL	Rs.10500/MT +30%	Rs.5700/MT +30%	Rs.7500/MT +45%	Rs.35000/MT +45%	85%
20.3.1990	Rs.6000/MT +5%	Rs.10500/MT +30%	Rs.5700/MT +30%	Rs.7500/MT +45%	Rs.35000/MT +45%	85%
1.3.1991	Rs.6000/MT +25%	Rs.10500/MT +50%	Rs.5700/MT +50%	Rs.7500/MT +50%	Rs.35000/MT +50%	90%
25.7.91	Rs.6000/MT +20%	Rs.10500/MT +40%	Rs.5700/MT +40%	Rs.7500/MT +50%	Rs.35000/MT +50%	90%
1.3.92	Rs.6000/MT +20%	Rs.10500/MT +40%	Rs.5700/MT +40%	Rs.7500/MT +50%	Rs.35000/MT +45%	85%
Pre-Budget 1992-93	36%	56%	57%	94%	65%	90%
Post-Budget 1992-93	36%	56%	57%	94%	60%	85%

Note: Percentage duty rates shown for pre-Budget and post-Budget 1992-93 have been derived from the rates per tonne where necessary, based on cif prices on 28th February, 1992.

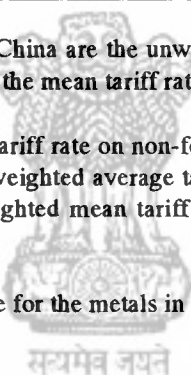
TABLE 7.7

**Average Tariff Rates on Non-Ferrous Metals in 1992
in Some Developing Countries**

(in per cent)

Metals and articles thereof	China	Philippines	Brazil	India
Aluminium	28.8	22.9	16.0	36.0
Copper	22.8	23.9	15.5	56.0
Zinc	24.0	17.9	9.4	57.0
Lead	24.0	17.9	9.1	94.0
Nickel	11.3	15.8	9.0	60.0
Tin	26.9	16.0	10.3	85.0

- Notes:**
1. The tariff rates given for China are the unweighted average rates and those given for the Philippines and Brazil are the mean tariff rates.
 2. The unweighted average tariff rate on non-ferrous metals in Indonesia was 11 per cent in 1989. In Mexico, the unweighted average tariff rate for non-ferrous metals was 12.4 per cent in 1990. The unweighted mean tariff rate for non-ferrous metals in Pakistan was 40.3 per cent in 1990.
 3. The tariff rates in India are for the metals in primary form.



MACHINERY

8.1 This Chapter discusses and recommends the restructuring of import duties on an important category of basic goods, namely, machinery or capital goods. Machinery is of interest for several reasons. First, it formed the core of India's state dominated industrialisation in the 1950's and 1960's. Second, it is the most durable example of protection in the past 40 years, with tariffs and import restrictions at the core of efforts at development. Third, protection has apparently failed to make the industry sufficiently competitive with evidence of stagnant productivity and rising costs. Fourth, reduction and removal of the trade control measures are the remedies now sought to inject competition and improve its efficiency. Since the main purpose of this analysis is to specify the type of tariff restructuring, we look into the current duty structure, complexities and anomalies, the type of cost disadvantages faced by the local producers in competing with foreign goods, and the level of neutralisation warranted to place them on a level playing field. The cost disadvantages suffered by the industry are used to guide us in prescribing the changes in the import duty rates. But before presenting this perspective, we begin with a brief overview of the structure and growth performance of this industry over the past two decades.

Structure and Growth

8.2 The machinery group covers a huge array of products - agricultural machinery and equipment, earth-moving and levelling machinery, coal cutting machinery, boilers and steam engines, food and textile machinery, machinery for the manufacture of paper, leather, cement, etc, power driven pumps, machine tools, electric motors, generators, transformers, switchboards, radio transmission apparatus, etc. - to name a few major items. Broadly, these items can be

categorised under two headings: non-electrical machinery and electrical machinery. In 1988-89, the non-electrical and electrical machinery industries together accounted for one-sixth of the productive capital employed in the organised manufacturing sector. In terms of employment, they accounted for one-tenth of total manufacturing employment. Similarly, the group accounted for 15 per cent of total manufacturing value added in 1988-89.

8.3 Table 8.1 gives a synoptic view of the growth performance of the machinery producing sector over the past two decades. The table demonstrates unambiguously that in line with the overall performance of the manufacturing industry, the machinery output increased at an appreciably faster rate in the 1980's than in the 1970's. The rate of growth in the 1980's was almost two times the growth performance in the 1970's. However, the trends are quite different if one looks separately at the two segments of machinery. For instance, in the 1970's, the faster growing segment was non-electrical machinery with a growth rate of 7.84 per cent per annum as against 5.62 per cent in the case of electrical machinery. The 1980's, however, reversed the situation. The annual growth rate of non-electrical machinery dropped to 5.6 per cent during 1981-89. On the other hand, the output of electrical machinery accelerated during the same period at the rate of 19.55 per cent per annum. This divergence in the growth performance between the two segments is noticed to continue even in the current decade. This can be seen from an examination of the data on the index of industrial production during the past two years. The growth rate of non-electrical machinery, for instance, drops further to 3.8 per cent, while that for electrical machinery is high at 22.35 per cent.

8.4 An alternative way of looking at the growth performance is to draw on the information relating to the growth of value addition in the production process. Table 8.2 provides the relevant data. The results are largely consistent with those based on the output figures except that they narrow down the differences in growth rates between the 1970's and 1980's. For instance, the value added in the machinery sector grew at 7 per cent per annum in the 1970's, while in the 1980's, it was 10 per cent per annum. Within the machinery sector, the electrical machinery experienced faster growth (11.6 per cent) than the non-electrical machinery (7.9 per cent).

8.5 Table 8.3 indicates the position regarding exports and imports of machinery items and their relative share in total exports and imports for the period from 1980-81 to 1990-91. What can be seen from these figures is that the share of machinery items in total exports has remained constant around 5 per cent, while the import share has fluctuated. It went up from 11 per cent in 1980-81 to 20 per cent in 1986-87; and then onwards the share has been falling.

8.6 The share of imports in net domestic availability of machinery goods (i.e. domestic production plus imports less exports) is presented in Table 8.4. The data presented in the table suggest that imports meet generally around one-fifth of the total availability. In 1980-81, for instance, the import share was 16 percent; then it climbed upto 20 per cent in 1985-86 but slid back to 16 per cent in 1989-90.

Customs Revenue from Machinery

8.7 Machinery items in general have been contributing a substantial percentage of the total yield from customs duties as will be clear from the following table:

Revenue from Machinery Covered by Budget Heads 41 to 44 and 50

Year	Amount (Rs.crore)	Percentage of gross import revenue
1987-88	3656	26.44
1988-89	3842	23.98
1989-90	4543	24.79
1990-91	5266	25.12
1991-92	5807	26.62
1992-93(BE)	6232	24.35

Import Duty on Capital Goods

8.8 Import duties on capital goods stand on a slightly different footing from the duties on other goods. For one thing, their benefit to the economy as producer goods and in contributing to revenue is of a recurrent nature until they wear out. For another, the negative effect of recurrent income tax benefit due to depreciation on the initial revenue accrual from import tariff is peculiar to the producer goods.

8.9 When a separate tariff heading for tariff item for project imports was created, it was basically as a facility for smooth clearance of goods intended for large projects, under a single heading with a single rate. However, over the years the scheme came to be used as a forum for extension of duty concession for certain identified projects like news print, paper, fertiliser and electronics. The rate of project import duty was all along equal to the general rate of duty applicable to general machinery except that countervailing duty (CVD) at the appropriate rate was leviable on general machinery. In

the 1985 budget a major departure was made when the import duty on general projects was reduced to 45 per cent, while general machinery continued to attract the duty of 84.8 per cent. The duty on fertiliser project import was made nil and the duty on power and electronics projects was reduced to 25 per cent.

8.10 In the 1986 budget, with a view to providing higher protection to the domestic capital goods industry, the import duty on the majority of the machinery items was increased from 84.8 per cent to 101.25 per cent ad valorem. The import duty on goods imported under the category of general projects was also increased from 45 per cent to 55 per cent ad valorem. In addition, the lower rate of 25 per cent on power and electronics projects and nil rate of duty on fertilizer project was continued. Such a divergence of rates on machinery imported under project imports and when imported otherwise, led to a situation wherein machinery required for modernization and technology upgradation was subjected to a much higher rate of duty than machinery required for setting up new projects.

8.11 In the 1987 Budget, the general machinery rate was reduced from 101.25 per cent to 85 per cent ad valorem and at the same time the general project rate was increased from 55 per cent to 85 per cent ad valorem. Both the categories were exempted from CVD. (Both the rates became 90 per cent with the 5 per cent increase in auxiliary duty effected in September, 1987). Higher rates were also prescribed for fertilizer project (going up from nil to 15 per cent ad valorem), power project of capacity of 50 MW and below (going up from 25 per cent to 35 per cent ad valorem) and electronic projects (going up from 25 per cent to 30 per cent ad valorem).

8.12 In the 1989 budget, the import duty on general machinery and general project imports was reduced from 90 per cent to 80 per cent as it was felt that some moderation in the rate of customs duty on capital goods was

needed. With effect from the 15th December, 1990, the duty was increased to 85 per cent and this was reduced to 80 per cent in the 1991 budget. There were some changes in the duty rates applicable to special projects like power projects and electronics projects.

8.13 In its Interim Report, the Tax Reforms Committee had recommended that the import weighted average duty for capital goods should be reduced to 55 per cent by 1995-96 from the level of 91 per cent in 1989-90. It was also indicated that this could be achieved earlier. (Paras 8.43 and 8.55 of the Interim Report). In the last Budget the duty on general machinery and projects was brought down from 85 per cent to 60 per cent in the first instance and to 55 per cent later. The Committee feels that the duty can be brought down further. The present duty structure on capital goods is as follows:

Project imports:

General projects	55 per cent
Electronics projects	50 per cent
Power projects	30 per cent
Fertilizer projects	nil

The duty on general machinery is 55 per cent. But there are several items of machinery which carry 35 per cent or 40 per cent or even lower rates of duty.

Complexity of the Existing Duty Structure

8.14 The problem with the current duty structure is that not only are the rates high, but it is a system with multiplicity of rates. Since the rates are high, there are pressures for exemptions and concessions. To fit the situation of a particular group, the exemptions are tailor made. Soon, it becomes another lifeblood of trade policy. The sequence of events come as follows. First, pressure is applied to push the Government to exempt certain items from the statutory rates. Then the notification extending this exemption is added. Each time, the law becomes more detailed and its administration becomes more complex - a medium more and more

hospitable to power politics, and more and more detached from its rationale. Notifications provide complexity, but not precision; and complexity camouflages opportunity for abuse.

8.15 Table 8.5 tries to highlight this complexity. For machine tools, for instance, there are at least five rates varying from 35 to 110 per cent. The rates applicable to imports of their parts and accessories are different: 40 to 60 per cent. Fertilisers machinery is totally exempt from duty. For normal project imports, the duty rate is 55 per cent; and for power project imports, the duty rate is 30 per cent. Then there is a concessional duty rate - 40 per cent for capital goods imports under the Export Promotion Capital Goods Scheme (EPCG). This concessional rate again varies - 25 per cent of the cif value under an export obligation of 3 times the cif value and 15 per cent under an export obligation of 4 times the cif value. It is important to realise that the rates indicated in the table are as per various executive notifications, while the statutory rates are still high. Again, there are a number of machinery items which are currently outside the scope of the notified rates, and so continue to attract the statutory rate. Yet another anomalous feature is that wherever a certain machinery item is under notified rate, the parts of the concerned one are outside the scope of the notified rate, though attempts are made to see that parts and accessories are taxed at a lower rate than the machinery.

8.16 The urgent need for rationalisation of the import duty structure relating to machinery would be readily appreciated from the information given above. Most producers produce mainly or largely for the domestic market. The aim should be to encourage them and enable to produce also for the foreign market. Hence import duty rates in general should not be prohibitive. High import duty rates also raise the financial cost of capital formation.

Criteria for Tariff Reduction

8.17 Prompt action is needed to simplify

and rationalise the current duty structure relating to machinery. First, one has to choose the criteria for determining the optimum or proper level of tariff from the point of view of giving protection to domestic industry. Theoretically, a straight forward method is to adjust the duties by comparing home prices with the corresponding international prices. The assumption underlying this method is that if domestic markets are truly competitive and frictionless, they would reflect domestic costs. However, it is known that when import duty rates are high domestic prices tend to equate the landed cost inclusive of duty, although there could be instances where domestic competition could keep the prices below such landed cost.

8.18 Another problem with this method lies in the qualitative differences between domestic products and foreign products bearing the same general description.

8.19 The implicit rate of tariff could be worked out on the basis of a comparison between domestic costs and international prices for a particular product or group of products. (Such a comparison also will be subject to the limitation that there could be qualitative differences between the products compared). However, the implicit tariff could not be equated with the optimum or necessary level of tariff because some part of the higher domestic cost would be due to inefficiency in the functioning of the industrial units which it is our aim to eliminate. Some part of the difference in cost could be attributed to the general inefficiency or other factors present in the economy over which the individual units have no control. So long as these inefficiencies exist the protective duty must be sufficient to compensate for the cost disadvantages resulting therefrom. The cost disadvantage could also stem from high import duty or non-remitted domestic indirect taxes on inputs. These have also to be kept in view.

8.20 It is generally agreed that the lower efficiency of the domestic infrastructure has

an unfavourable impact on the cost of production in India. While the cost of power in India in general is not unfavourable (see Annexure VIII.1) there are often interrupted supplies; also captive generation often leads to higher costs. The transport and communication sectors in India cannot compare in efficiency with those in advanced countries or even in some of the developing countries which are industrialising fast.

8.21 The second source of cost disadvantage is the relatively high cost of basic material inputs like basic metals and chemicals. Part of this higher cost of inputs is to be attributed to inefficient domestic production and part of it to high duties particularly import duties on those inputs. Either these duties would have to be reduced or one must make allowance for them. The third reason for higher domestic cost is the high interest rates prevailing here than in several countries with which India has to compete. It is difficult to quantify the exact degree of cost disadvantage due to this reason because the interest burden would depend upon the capital mix, that is, the proportions of different types of capital used for financing production - plough back of profits, equity, long term debt and working capital. It is, however, clear that the interest rate in India, especially in recent times has been significantly higher than in countries such as Korea and Malaysia as well as in industrialised countries.

Evaluating the Cost Disadvantage

8.22 An attempt has been made to gauge the gap between domestic and foreign cost of capital goods production due to the factors mentioned above. For this purpose it was necessary to estimate first the production cost.

8.23 Production costs were approximated to costs of capital, labour, material inputs, fuels and other miscellaneous charges. We then assumed that this structure would hold if we had available, and could compare with, a structure for the

foreign country. Next using the differences between foreign and domestic rates - interest rate, electricity price and raw materials prices - and the weights of each of the relevant cost components in the total costs, the relative cost disadvantage was determined.

8.24 The principal problems that had to be encountered in framing these estimates fall into four categories:

First, we had to have an estimate of cost of capital. The data on fixed capital given in the **Annual Survey of Industries** are at historical prices; and, moreover, depreciation is provided for keeping the financial accounts in view and not economic criteria.

Second, the fixed capital stock includes both domestic and imported plant and machinery. The latter had to be separated from the total because the home producer, unlike his foreign counterpart, is obliged to pay duty on imported plant and machinery, besides high interest cost on the capital invested.

Third, the material inputs consumed by domestic industry also include a portion that is imported. This portion had again to be separated from the rest, as in the case of capital.

Finally, the cost of electricity input is not given separately. Therefore, this again had to be separated from the total input costs.

8.25 We have obtained the data on the cost of capital from a recent study "Performance Variation Across Industries".¹² This source provided estimates of fixed capital stock at three digit ASI classification level for the period 1987-88. This information has been used after updating the estimate for the latest year for which data were

available from the Central Statistical Organisation (CSO).

8.26 For separating the imports from the totals - both for capital equipment and material inputs, we drew upon the information contained in the import flow matrix for 1989-90. Similarly, for getting the electricity cost, the data on electricity consumed in KWH given in the **Annual Survey of Industries** were converted into value terms by using the electricity price. Thus electricity costs were separated from total input costs.

8.27 Once we have a picture of these different cost components, (see Annexure VIII.2) the way is open to evaluate how the price structure in India in servicing these cost components places the home industry at a disadvantage compared to its counterparts abroad. The actual formulae for computing this may be written as follows:

$$\begin{aligned}
 TC_D &= (K_D + K_I)IR_D + L + ELY + ORM_D + ORM_I \\
 TC_I &= (K_D + K_I)IR_I + K_I(1-T_1) + L + \\
 &\quad ELY(PI/PD) + ORM_D(PI/PD) + ORM_I(1-T_2) \\
 TC_D - TC_I / TC_D &= K_D/TC_D(IR_D - IR_I) + \\
 &\quad K_I/TC_D(IR_D - IR_I - 1 + \\
 &\quad T_1) + ELY/TC_D(1 - P_I/P_D) + \\
 &\quad ORM_I/TC_D \times T_2
 \end{aligned}$$

TC_D	=	Total cost, domestic
TC_I	=	Total cost international
K_D	=	Capital stock, domestic
K_I	=	Capital stock, imported
IR_D	=	Interest rate, domestic
IR_I	=	Interest rate, international
L	=	Labour employed
ELY	=	Electricity consumed
ORM_D	=	Other raw materials, domestic
ORM_I	=	Other raw materials, imported
T_1	=	Tariff on imported-plant and machinery
T_2	=	Tariff on imported raw materials, components, parts, etc.
P_D	=	Price, domestic
P_I	=	Price, international

8.28 The framework spelt above was applied to a set of six different categories of machinery goods. The date of reference for implementing these calculations is 1991-92.

The Results

8.29 Table 8.6 exhibits the summarised results of these calculations. Scenario I exhibits the overall cost disadvantage across six commodity groups under the prevailing import duty structure on inputs and domestic costs. The cost disadvantage varies between 25 and 33 per cent. Electrical machinery has the highest cost disadvantage (33 per cent) and machine tools have the lowest cost disadvantage (23 per cent). In Scenario II, we make a hypothetical reduction of the rate of duty on imports of plant and machinery to ascertain its effects on cost reduction. The duty reduction diminishes the cost disadvantage in all sectors by 2 to 4 percentage points. In Scenario III we make this hypothetical duty reduction in respect of both plant and machinery and basic raw materials. The cost disadvantage scales down by 6 to 7 percentage points. In electrical machinery, for instance, the cost disadvantage diminishes from 33 per cent to 25 per cent. In food and textile machinery the disadvantage diminishes to 20 per cent from the earlier high level of 27 per cent; in boilers, steam engines, etc. it diminishes to 24 per cent, from the height of 30 per cent; and in machine tools, it comes down to 17 per cent from the height of 23 per cent. Finally, in scenario IV, we make a hypothetical 50 per cent reduction in the interest rate. In this case, the magnitude of reduction is much smaller than those obtained by tariff cuts. This can be seen by comparing the results of Scenarios III and IV.

Modvat for Capital Goods

8.30 Capital goods imported are at present not subject to any countervailing duty (CVD). The Committee is of the view that, in principle, there should be no exemption for any goods from CVD, in as much as this

serves as a protection to the domestic industry being equal to the excise duty borne by the goods domestically produced, when the protective import duty itself has been set at a reasonable level.

8.31 What the Committee suggested in the Interim Report was that a part of the protective customs duty (equivalent to the excise duty on the corresponding domestic products) could be converted into CVD. This would reduce the level of protective customs duty for such capital goods but would not involve any loss of revenue in the year in which the duty is reduced. It was also suggested that Modvat could be extended in a slightly different form to capital goods. The credit for CVD on the imported capital goods (and for excise duty in the case of domestically produced capital goods) could be allowed to be utilised over a period of four years for payment of excise duty on finished goods produced using these capital goods. This would lower the cost of capital goods to the user industries with consequent benefit in terms of lower cost of production. The spreading of the utilisation of credit over four years has an advantage that the immediate loss of revenue would be small. In any case, part of the loss of revenue will be recouped through higher income tax resulting from lower depreciation.¹³

Recommendations

8.32 The foregoing exercise we have carried out to assess the cost disadvantages of the domestic industry producing capital goods vis-a-vis the foreign producers is intended to obtain a broad quantitative measure of such disadvantage. While it cannot be claimed that our estimates precisely and accurately capture the cost disadvantages, we believe that the exercise indicates the order of magnitude of the disadvantage suffered by domestic industry.

8.33 We find that the existing cost disadvantage to the machinery sector owing to conditions of inefficiency present in the domestic economy and higher input cost

partly due to higher cost of domestic production and partly due to high import duties, is around 30 per cent. A scaling down of tariff on imports of material inputs (including capital goods) would have a relatively high cost reducing effect. We are recommending reductions on import duty rates on metals as well as parts and components. Table 8.7 gives the prevailing rates of duties on different types of capital goods. It would be seen that these rates are much higher in several cases than what is needed to give adequate protection to the domestic industry even under the existing scale of disadvantages. We believe that the duty rates should be substantially brought down by 1997-98. By that time the import duty rates on imported metals and other inputs would have been brought down. We could also legitimately expect improvement in the efficiency of domestic production and of infrastructure. Hence we would recommend that the import duty rate on all capital goods and project imports should be 20 per cent. In addition a CVD of 10 per cent should be levied for which Modvat credit should be given as recommended by us below. An exception may have to be made in respect of power projects, as Modvat credit will not be available. In the case of power projects, therefore, no CVD may be levied. In respect of electrical machinery, there could be a rate of 25 per cent without CVD as that industry would not be able to avail itself of Modvat credit.

8.34 We would recommend that the excise duty on domestically produced capital goods should be brought down from the existing level of 17.25 per cent to 10 per cent. The excise duty in the case of domestically produced goods and CVD in the case of imported goods, may be credited in the Modvat account of the user of the machinery with the restriction that the credit to be used in any one year after clearance of the indigenous or imported goods will not exceed one-fourth of the duty. Any unutilised portion in any one year could be permitted to be carried over for utilisation in the subsequent year or years.

8.35 Modvat credit of CVD or excise duty will not be available to an importer or purchaser of machinery who uses them for production of goods which do not pay any excise duty either because they are exempt or because the operation is within the small scale sector.

8.36 Such a scheme will have to be incorporated in the law and would call for some amendments to the Central Excise Rules.

8.37 When a provision is made for credit of countervailing duty, the question would arise as to the treatment to be given to CVD for income tax purposes. One view is that the CVD should also form part of 'actual cost' of the machinery and would be dealt with as such while computing depreciation

allowance. In that event, Modvat credit, as and when received, will constitute income for tax purposes. This can be brought about by a suitable amendment of section 28 of the Income-tax Act. (Otherwise, it is likely that the credit, when received might be credited to a Capital Reserve or such other account and not treated as revenue for tax purposes). Another approach would be to keep out the amount of CVD from the cost of capital. In this case, the amount of CVD paid would be treated as revenue expenditure in the year in which it is paid and Modvat credit could be treated as revenue income to the extent to which credit is given each year. We have considered both the alternatives and we are of the view that the second method is preferable. Suitable provisions in this regard should be made in the Income Tax law.



TABLE 8.1
Growth of Machinery Output

(Per cent per annum)

	1971-80	1981-90	1990-92
Growth of manufacturing output	4.33	7.56	6.60
Growth of machinery output	6.56	12.58	13.07
Electrical machinery	5.28	19.55	22.35
Non-Electrical machinery	7.84	5.62	3.80

Source: Office of the Economic Adviser, Ministry of Industry, Government of India, **Handbook of Industrial Statistics.**



TABLE 8.2**Annual Growth Rate in Value Added**

(Per cent)

	1970-80	1981-90
Manufacturing total	4.91	8.09
Machinery	7.11	9.75
Electrical machinery	7.19	11.62
Non-electrical machinery	7.03	7.89

Source: C.S.O., National Income Accounts Statistics.

TABLE 8.3**Exports and Imports of Machinery**

(Value in Rs. crore)

	1980 -81	1981 -82	1982 -83	1983 -84	1984 -85	1985 -86	1986 -87	1987 -88	1988 -89	1989 -90	1990 -91
Exported machinery	329 (4.9)	406 (5.2)	397 (4.5)	378 (3.8)	466 (3.9)	492 (4.5)	626 (5.0)	735 (4.7)	1068 (5.2)	1465 (5.3)	1695 (5.2)
Imported machinery	1349 (10.8)	1675 (12.3)	1933 (13.5)	2726 (17.2)	2658 (15.5)	3516 (17.9)	4061 (20.20)	3919 (17.8)	4435 (15.7)	5324 (15.0)	5823 (13.4)
Total export	6711	7806	8803	9771	11794	10895	12452	15674	20232	27623	32405
Total import	12519	13608	14292	15832	17134	19658	20096	22294	28235	35415	43193

Source: Directorate General of Commercial Intelligence and Statistics, Ministry of Commerce, Government of India, Monthly Statistics of the Foreign Trade of India.

TABLE 8.4**Share of Imports in Net Domestic Availability of Machinery Goods**

	1980-81	1985-86	1989-90
Net domestic availability (production plus imports less exports) (Rs. crores)	8301	17391	34585
Imports (Rs. crores)	1349	3516	5324
The ratio of imports to total availability (Percentage)	16.2	20.2	15.4

Source: National Accounts Statistics and Monthly Statistics of the Foreign Trade of India.



TABLE 8.5**Duty Rates on Machinery
(As of March 1992)**

Items	Basic + auxiliary duty (per cent ad valorem)
Machine Tools:	
28 items of machine tools listed in Notification (1-3-1986)	110
79 items of machine tools listed in the notification (1-3-1986)	60
34 items of machine tools listed in the Notification (1-3-1978)	35
327 items of machine tools listed in the Notification (17-9-1987)	40
All other machine tools	80
Parts of machine tools	40-60
All other machinery excluding fertiliser machinery	55
Parts of all other machinery	40
Fertiliser machinery	Nil
Normal project imports	55
Power projects	30
Machinery under Export Promotion Capital Goods (EPCG) scheme	40



TABLE 8.6

Relative Cost Disadvantage of Domestic Producers

(percentages)

Title	Scenario I	Scenario II	Scenario III	Scenario IV
Agricultural/horticultural/ forestry machinery	29.68	28.10	28.00	27.90
Boilers, steam engines, internal combustion engines etc.	30.20	28.90	23.90	27.80
Food and textile machinery	27.28	24.80	20.90	24.30
Machinery for the manufacture of paper etc.	25.40	22.70	19.00	22.20
Machine tools	22.69	19.30	16.50	16.80
Electrical industrial machinery	32.90	29.00	25.10	30.60

Notes: **Scenario I:** Scenario I is calculated by using the following parameters. The life of plant and machinery is assumed to be 15 years. Domestic interest is taken as 20 per cent, and foreign interest rate 7 per cent. Tariff on plant and machinery 55 per cent; and tariff on basic material inputs is a weighted average of tariff on basic metals, alloys, etc.

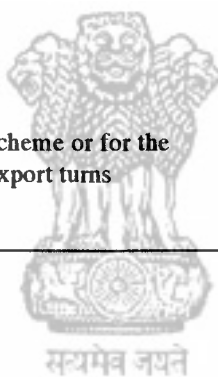
Scenario II: All remains the same except tariff on plant and machinery which we reduce to 25 per cent to see how it affects cost disadvantage.

Scenario III: All remains the same as in Scenario II, but the tariff on all basic material inputs is reduced to 55 per cent.

Scenario IV: Interest rate is reduced to 10 per cent; all the rest remains the same as in Scenario I.

TABLE 8.7
Prevailing Tariff on Capital Goods

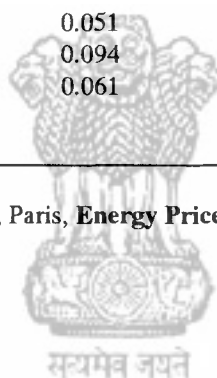
Items	Prevailing rate (per cent ad valorem)	
	Basic + auxiliary	CVD
1. Non-electrical and electrical machinery other than machine tools	55	Nil
2. Parts and accessories of non-electrical and electrical machinery	40	Nil
3. Machine tools currently in the peak rate	110	Nil
4. All other machine tools	60	Nil
5. Normal project imports	55	Nil
6. Power Projects	30	Nil
7. Machinery imports under EPCG scheme or for the manufactured items with major export turns	40	Nil



Electricity Prices for Industrial Use in US Dollars/KWH

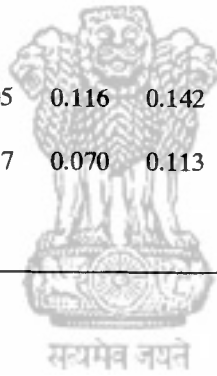
Country	1980	1986	1990
Industrialised countries			
Canada	0.020	0.026	0.036
Finland	0.050	0.045	0.062
Germany	0.057	0.066	0.091
Italy	0.065	0.070	0.098
Japan	0.086	0.127	0.126
United Kingdom	0.063	0.053	0.066
United States	0.037	0.049	0.048
OECD	0.050	0.062	0.071
Developing countries			
India	0.051	0.049	0.049
South Korea	0.094	0.073	0.070
Taiwan	0.061	0.069	0.080

Source: International Agency, OECD, Paris, **Energy Prices and Taxes**, First Quarter 1992.



Weights of Cost Components

	Industry	K_D	K_I	L	ELY	ORM_D	ORM_I	Total
1.	Agricultural/ horticulture/ forestry/ machinery	0.090	0.050	0.080	0.008	0.771	0.001	1.00
2.	Boilers, steam engines etc.	0.117	0.070	0.100	0.007	0.586	0.150	1.00
3.	Food and textile machinery	0.149	0.084	0.090	0.012	0.525	0.140	1.00
4.	Machinery for the manufacture of cement, paper etc.	0.159	0.090	0.109	0.012	0.498	0.132	1.00
5.	Machine tools	0.205	0.116	0.142	0.020	0.408	0.108	1.00
6.	Electrical machinery	0.117	0.070	0.113	0.010	0.545	0.145	1.00



ELECTRONICS INDUSTRY

Introduction

9.1 India has a significant electronics sector that accounted for production of about Rs.10,000 crore in 1991. The output of electronic products has been increasing sharply in the past two decades as is evident from the following figures:

Year	Domestic output of electronic goods (Rs. crore)
1971	173
1976	410
1981	856
1986	3460
1991	9725

9.2 The electronics industry consists of six major sub-sectors, which are:

- i. Consumer Electronics;
- ii. Industrial Electronics & Control Instrumentation;
- iii. Computers and Peripherals;
- iv. Communication and Broadcast Equipment;
- v. Strategic Electronics; and
- vi. Electronic Components

9.3 The first five sub-sectors can be clubbed into electronic equipment sector while the last one is the component sector.

Production

9.4 The breakup of sub-sectors and their respective values of production during

1987-1991 are presented in Table 9.1. The annual compound growth rates of value of production (at current prices) in respect of communication and broadcast equipment, components, industrial electronics and computers and its peripherals and output from Export Processing Zones were above 20 per cent in 1987-1991 whereas the growth rates of consumer electronics and strategic electronics were below 20 per cent. The structure of production has been constantly changing with the advent of improved technology.

9.5 The growth rate in nominal terms of overall production of electronics was 33.5 per cent in 1988, which declined to 10.7 per cent during 1990 and further to 5.7 per cent in 1991.¹⁴ In real terms, the growth rate in 1991 has been negative.¹⁵ The compound annual growth rate (nominal) from 1987 to 1991 works out to 20.02 per cent. Even in real terms (based on WPI for electrical machinery, which includes electronics), the growth rate between 1987 and 1991 was high at 12.42 per cent. It is only recently that the growth of the industry has slowed down.

Exports

9.6 The sectoral breakup of exports of electronic items is given in Table 9.2. The volume of India's electronics exports has been moderate. The share of exports in the value of production of electronics was 6.6 per cent in 1987 which increased to 9.25 in 1991.¹⁶ Even this moderate proportion of exports has been attained primarily due to the growth in the exports from Export Processing Zones (EPZ) and in computer software.

9.7 The production base of the electronics industry is widely spread, consisting of over 2800 units. Of the 2800 units, 11 are Central public sector units, over 65 units belong to the States public sector, over 450 units are in the organised private

sector and the remaining units are in the small scale sector. About 70 per cent of the total production of electronic goods is accounted for by 300 major production units. In terms of contribution to the total production of electronics, the public sector accounts for 30 per cent, SSI contributes roughly 30-35 per cent, and the remaining 35-40 per cent is contributed by the organised private sector.¹⁷

Imports

9.8 The domestic manufacture of electronic components is highly import intensive. The component industry has to import the major part of the required raw materials and piece-parts, as the indigenous base for such materials and piece-parts is absent in our country. The variety of such materials is so large and the individual requirement of many of these materials is so low that it may not be economically viable to produce many of these materials in the near future. The estimate of such imports is around Rs.500-600 crore a year. Imports are likely to grow with the growth of the component industry.

9.9 The component requirements of the equipment sector are met by domestic sources upto a certain extent, which varies from sub-sector to sub-sector. For example, in the case of Black & White T.V., indigenisation level is very high. In the case of Colour T.V. also indigenisation level is adequate. However, in Industrial Electronics, Telecommunication and Computers, the import content is very much higher. The estimate of the present import bill for components is Rs.800-900 crore per year. The requirement of certain components is at present so low that in the case of these components it may not be possible to produce them at a competitive rate. These may, therefore, continue to be imported.

Price Trends

9.10 Even though it is difficult to make comparisons, as the quality and technology in almost every component and equipment are

changing in quick succession, an attempt was made to ascertain the price trends in the international market relating to electronic components and equipment during the last five years.

9.11 In the case of passive electronic components and active components of low technology, prices in dollar terms have been relatively stable, in some cases with marginal decline. In the case of components involving high technology, prices have substantially declined due to the advent of new products. In the case of the equipment sector, there has been marginal decline.

Revenue from Import Duties

9.12 There is no separate budget head for the electronics industry and therefore precise information on revenue collection from this sector is not available. However, details pertaining to electrical machinery, which includes electronics, are available. Revenue collection from imports of electrical machinery has been as follows:

Year	Customs duty (Rs.crore) ¹⁸
1987-88	796.83
1988-89	1347.77
1989-90	1733.30
1990-91	1589.45
1991-92 (RE)	1600.00

9.13 The electronics industry has already become an important sector in the economy and we recommend that a separate head may be created for this sector in the Receipts Budget.

Tariff Structure

9.14 The general rates of duty on different items of the electronic industry between August 1983 and October 1992 are shown in Table 9.3. Prior to 1983, there was no special duty scheme for the electronics industry. Different categories of equipment

were subject to different rates of duties, depending in many cases upon the end-use and the end-users. The raw materials and piece-parts required for the production of electronic goods were chargeable to various rates of duties based on the classification. In the majority of cases, duties on raw materials and piece-parts were higher than those on components and equipment. In 1983, steps were taken to streamline the tariff rates. For specified raw materials three rates viz., 0 per cent, 15 per cent and 45 per cent were prescribed. The duty rate for electronic components was fixed at 75 per cent. In order to encourage manufacture of electronics equipment (including components), the duty on project imports and capital goods for the electronics industry was reduced to 25 per cent. Electronic equipment continued to be chargeable to various rates of duties.

9.15 In June 1986, another step was taken to streamline the duty structure. The duty for raw materials was fixed at 30 per cent, for piece-parts at 45 per cent and for components at 75 per cent. Equipment, however, continued to attract various rates in the range of 25-150 per cent. Duty rates on finished equipment were not rationalised and the rates were varying widely in the range of 25 to 40 per cent depending upon the end use and the end-users.

9.16 In March 1988, the duty structure was further rationalised by prescribing a uniform rate of 100 per cent for all electronic equipment irrespective of the end-use or end-user (barring items meant for defence use and consumer electronics).

9.17 As of October 1992, the rate structure is: 40 per cent for raw materials, 60 per cent for piece-parts, 80 per cent for components, and 95 per cent for the finished products. This structure (though not the level) conforms to the basic guiding principle for the rationalisation of the tariff rates, indicated in the Long Term Fiscal Policy and also the recommendation in Para 8.22 of our Interim Report. (Raw materials and intermediate goods should have a duty rate less than that

for capital goods which in turn will have a duty rate less than that for finished goods).

Need for Reforms

9.18 We had recommended in paragraph 8.22 of the Interim Report that there should not be any marked escalation in the tariff rate with the degree of processing since it would discourage manufacturers to go in for backward integration. In the present duty structure relating to the electronics industry, we find that this principle has not been adhered to. Besides, we note that in determining the level of tariff, the depreciation of the real exchange rate has not been kept in view.

9.19 The Department of Electronics (DOE) have supplied information to the Committee on the input coefficients (as percentage of the output value) for producing goods at different levels of the value addition chain from the available upstream levels. These are indicated in Table 9.4. Effective rates of protection at the current duty rates, after taking into consideration the changes made in the last budget, are indicated in Table 9.5. It is seen that the present duty structure continues to encourage the import of components. It is necessary to correct the imbalance in the present duty structure.

9.20 A peculiar feature of the electronics industry is high value combined with low-volume/weight. Value to volume ratio is high in electronic components and particularly in the case of active components like integrated circuits and micro processor. In such a situation, the other consequence of a duty as high as 80 per cent is that it leads to smuggling and under-invoicing of the imports. Industry Associations and certain manufacturers have informed the Committee that in certain cases where the prices of indigenously produced items are lower than the landed price of similar imported goods, imported materials are available at even lower prices through smuggling, thus adversely affecting the domestic industry. The nature and variety of electronic products

are very large and it is almost impossible to administratively prevent under-invoicing. If the duty rates get lowered, the advantages gained by unscrupulous importers through smuggling and under-invoicing will be minimised.

9.21 Electronic items have applications in diverse fields such as industry, entertainment, telecommunication services and computers. Electronic online process control instrumentation, data acquisition systems, appropriate automation of the production processes using electronic instruments and computerised design reduce the downtime considerably in chemical, fertiliser, fibre and various other industries. This helps in improving capacity utilisation and improving industrial efficiency. The existing duty on machinery in general is 55 per cent. The general rate in the case of project imports is also 55 per cent. We are recommending a substantial reduction of the levels of duty on machinery and project imports. With the reduction in the rate of duty, domestic producers will be able to produce capital goods at competitive rates. Items of electronic equipment which are in the nature of capital equipment must bear the duty at the same level, or atleast similar level of duty on other capital equipment. A duty rate as high as 95 per cent or 80 per cent discourages the use of such equipment, which is an unintended result of the existing high duties.

9.22 An anomaly in the present duty scheme for the electronics industry is the exemption from payment of CVD on imported electronic equipment except in the case of computer, peripherals and consumer durables. However, domestic manufacturers of such equipment are required to pay excise duty at the rate of 15 or 20 per cent (plus special excise duty). So long as the import duty is unduly high, this anomaly perhaps does no harm. However, when the import duty is brought down to a level just enough to give reasonable protection, the absence of CVD will place the domestic manufacturer at a disadvantage. This anomaly will need to be

rectified.

Recommendations

9.23 The prices of electronic products in India are higher than the prices prevalent in international markets. For many components, prices are at least 50 per cent higher than the world prices.¹⁹ A similar situation exists in respect of the equipment sector wherein prices are 1.5 to 3 times higher than the international prices. For the purpose of comparison of the domestic prices with the cif prices, we have selected a few electronic components and items of equipment. Data on prices have been obtained from the Industry Associations.

9.24 In the case of Aluminium Capacitor industry, it was indicated by the Industry Associations that even though the domestically produced product is quite competitive with imported ones, under-invoiced imports are having an adverse impact on the industry.

9.25 In the case of Black and White T.V. picture tube, it was found that the implicit tariff is only about 30 per cent.

9.26 In the case of Colour T.V. picture tube, the import content is quite high. However, parts of Colour T.V. picture tube at present carry an import duty of 60 per cent. It was also observed that prices of Colour T.V. picture tubes have been kept by the domestic manufacturers at a level almost equal to the landed price of imported picture tube. This item has been provided with additional protection by placing it in the negative list.

9.27 An item which has high implicit tariff is soft ferrite. Here the implicit high tariff is due to factors other than taxation, namely, due to high interest rates, and highly capital intensive nature of the industry and high capital-output ratio.

9.28 We find that the implicit tariff varies from component to component ranging from 25 to 80 per cent. The implicit tariff

appears to be high in areas which are physically protected or where duty rates on inputs are high or where the number of manufactures is limited. It is not economically justifiable to prescribe different duty rates for different components. Nor is it practicable to administer such a structure. Manufacturers of components with high implicit tariff should take immediate steps to restructure their activities, so that they become competitive.

9.29 In the equipment sector, the implicit tariff was found to be in the range of 10 to 110 per cent. In this sector, one factor that puts domestic manufacturers at a disadvantage is the excise duty leviable on such manufacture, while no CVD is leviable on imports. In the case of certain instruments, import duty on parts is higher than on the finished equipment.

9.30 An important reason for the high implicit tariff, in both sub-sectors of Electronics Industry (components and equipment), is the very high import content and the high import duties. Equipment manufacturers are importing substantial quantities of components. Component manufacturers import almost all the raw materials and piece-parts. Very few domestically produced raw materials or piece-parts are used by the component industry due to lack of support base. All such items carry high duties which directly lead to higher costs and also lead to higher levels of working capital and higher cost of inventories, which in turn lead to cost escalation of finished products.

9.31 As indicated earlier, in the electronics industry, there is a marked escalation in the tariff rate with the degree of processing which discourages manufacturers to go in for backward integration. In the 1992-93 budget, the first step to equate the rates on sub-assembly and equipment has already been taken. The logical next step would be to equate the rates of duty on sub-assembly and equipment with that on components by suitably lowering the rates of

the former. In the existing scheme, domestic manufacturers of equipment are required to pay excise duty at 17.25 per cent while no CVD is charged on imported equipment. We recommend that this anomaly be immediately removed by levying CVD on imported equipment. Further, manufacturing of electronic equipment from components is not capital intensive compared to the component manufacture. From the input-output co-efficient provided to us by DOE (Table 9.5), we find that the value addition from the component to equipment stage is very substantial; components form 50 per cent of the value of the complete equipment. In the circumstances, there is no justification to prescribe higher protection to the equipment sector than for the component sector. The Committee is, therefore, of the view that component, sub-assembly and equipment should attract the same rate of duty.

9.32 The earlier stages in the electronic industry are piece-parts and raw materials. Both these stages are relevant to component manufacturers. The existing duty differential between these stages is 20 per cent in each stage. This will have to be narrowed gradually and by 1997-98, duty rate on piece-parts should also get merged with the rate on components and equipment. Taking into account the capital intensive nature of manufacturing of components, we recommend a differential of 10 per cent between duty rates on components and raw materials.

9.33 As indicated earlier, the existing duties for raw materials, piece-parts, components and equipment have been continuing from 1988 with minor variations. During this period, there has been substantial depreciation in the real exchange rate of the rupee, which in turn should have given a much higher protection to domestic producers than in 1988 or 1983. Higher import content in this industry would have partially offset the increase in the level of protection. Even then, the effective protection has substantially gone up. On this account alone, there is a case for reducing the nominal rates as well as

differential in the rates at different processing levels in the electronics industry.

9.34 The Committee is of the view that by 1997-98, the protective duty on piece-parts, components and electronic equipment may be lowered to a level of 30 per cent and on raw materials to 20 per cent.

9.35 We have separately recommended reduction of general machinery rate to 20 per cent. The rate recommended for the electronic components and equipment is 30 per cent to be achieved by 1997-98. We are aware that in situations where an electronic component or equipment forms part of industrial machinery, the duty rate on the final product will be lower than on inputs. This is against the basic principle in the rationalisation of the tariff. It will, therefore, be desirable ultimately to lower the import duty rate on electronic components and equipment to 20 per cent. Given the existing level of development of the electronic industry, it may not be possible to bring down the reduction of duty to such a level by 1997-98. However, attempt should be made to remove this duty differential in due course.

9.36 We find that a number of electronic items are listed in the negative list - Restricted Items-F.²⁰ This provides additional protection to the components and computer industry but leads to distortion in the tax structure. We would recommend the elimination of such distortion by abolishing the entry relating to electronic items referred to above from the negative list.

9.37 We are given to understand that there are a number of active components as in VLSI/LSI which are not likely to be produced in the country in the next 8-10 years, unless a multinational company decides to produce such items in India. No protective duty should be levied on such goods. Any such duty would escalate the cost of the final equipment without any economic benefit. We are given to understand that within a similar group of components, certain items are being produced in the country while

others are imported and that it is not administratively feasible to make a distinction at the time of clearance by Customs officers. We are, therefore, not making any recommendation for special treatment of the class of electronic components mentioned above.

9.38 Another step that should be taken towards rationalisation of the tariff relating to the electronics industry relates to the present system of notifying the items which attract 40 per cent, 60 per cent, 80 per cent or 95 per cent duty. The electronics industry is one in which new technologies are emerging in quick succession, which results in new products in the world market. In the present scheme, the above rates are applicable after an item is notified; otherwise the item attracts the statutory rate, which is normally the peak rate. This system acts as a barrier to the import of new products and technologies. We, therefore, recommend that the effective duty rates should be incorporated in the Tariff itself even if it would mean extension of the reduced rate to items other than what is specifically described in the notification. This can be done in the first phase for components and equipment by 1997-98 and for raw materials and piece-parts, when the basic raw material rates are lowered to the finally recommended level. This would eliminate the need to frequently notify new items and also help the inflow of the latest products and technology.

9.39 Electronic equipment contains electronic components as well as non-electronic parts. In many cases like computers and telecommunication equipment, the duty rates on electronic and non-electronic components are different. Such a distinction in our view is irrational and creates administrative complications and should be removed early. However, in certain situations we may have to permit such a distinction to continue till the duties are lowered to the finally recommended level. At present, the distinction between non-electronic and electronic component is made on the basis of the expression (which

was framed before the introduction of HSN based tariff), "other than parts containing thermionic valves or transistors or other semiconductor devices or light emitting diodes or electronic micro-circuits or capacitors". We understand that this expression has led to disputes in interpretation. We recommend that this should be replaced by "other than populated printed circuit board and the goods falling under Heading numbers 85.32, 85.33, 85.34, 85.40, 85.41 or 85.42".

9.40 A matter which needs clarification is the scope of the term "Electronics Industry". This term is neither defined nor used in the Customs Tariff. But the term is used in a number of notifications, particularly those relating to project import, capital goods, etc. The Committee is of the view that the scope of the term should be defined by listing the concerned Heading/Sub-Heading numbers in the Customs Tariff.

Computer Industry

9.41 Earlier in this chapter, we have discussed in general the duty structure applicable to the electronics industry. Computer Hardware is a product of the electronics industry like other electronic equipment. The duty structure applicable to the electronics industry is applicable to the inputs for the computer industry also. In addition, the computer industry has been given from 1984 onwards more favourable duty rates on parts used by the industry. A higher import duty on computers than on electronics equipment was also fixed to protect the indigenous industry. (These duty rates have been changed a number of times but without disturbing the broad structure). By now, the computer industry has taken roots in the country and hence, the Committee is of the view that no favourable treatment need be given to this segment of the industry in respect of customs duties. The duty rates applicable to electronic component and equipment industry should also be made applicable to the computer industry.

Capital Goods for Electronics Industry

9.42 Capital goods imported for modernisation and balancing and under project imports, in the case of the electronic industry are charged to a duty of 50 per cent, as against the normal machinery rate of 55 per cent. We have recommended elsewhere in the Report that the duty rate on general machinery and project imports should be lowered by 1997-98. The electronic components industry is a capital intensive industry. The situation in the industry producing electronic equipment is different. However, it is not desirable to prescribe different rates for different sub-sectors of the electronic industry. We therefore, recommend that the rate of 20 per cent (plus CVD) may be made applicable to the electronics industry as early as possible. This will get merged with the general machinery rates when that is lowered to the 20 per cent level. The components of such machinery should also be allowed at the same duty level.

Certification by Department of Electronics /Directorate General of Technical Development/Department of Telecommunications

9.43 At present, in a large number of notifications pertaining to the electronics industry, the notified rates are made applicable subject to certification by the DOE or other Departments and agencies. As the duty rates are lowered and rationalisation is carried out over a period of time, these notifications will become redundant. However, we are of the view that even now in a number of cases, the procedure of certification can be dispensed with. For example, such requirement is prescribed often in addition to an undertaking or end use bond from the manufacturer. This only creates a hurdle in the smooth flow of material to the industry. We would urge the Government to dispense with such a requirement in as many cases as possible.

9.44 There are three important areas, pertaining to electronic goods as well as non-electronic goods wherein rationalisation

of import tariff is required early. Since a substantial portion of imports in these areas pertain to electronic goods, we are discussing these matters in this chapter.

Imports by Research Institutions

9.45 All scientific and technical instruments, apparatus and equipment, parts, consumables, etc. are allowed to be imported duty free by research institutions. As a measure of protection to the domestic industry, this concession is subject to the condition that goods are such as are not manufactured in India. Such a concession leads to an end result which is contrary to the interests of the domestic industry. Since no duty is levied on imports, imported equipment has a lower price tag, while comparable equipment (with slightly different specifications) produced in the country will have higher prices, as inputs have to bear the import duty, and the final product, excise duty and sales tax. Users, therefore, prefer to import the instruments with better technical specifications, even though the requirement can be satisfied with equipment made in the country. The consequence of such a concession will be that these items of equipment will not be taken up for manufacture in the country even in future, if the main users are research institutions. We do not find any economic justification in providing indirect subsidy through the mechanism of import duties to the research institutions, particularly when the duty rates would be at reasonably low levels. The Committee is, therefore, of the view that this distortion must be removed as early as possible. Research institutions must pay the duty as payable by any other importers of similar goods.

Medical Equipment and Parts

9.46 Specified items of medical equipment which are considered as life saving are allowed to be imported duty free by hospitals, doctors, traders or other persons (Notification No.208/81 dated 22.9.81). Parts of such medical equipment required by the

indigenous manufactures are however not allowed duty free and are charged to various duty rates ranging from 80 to 110 per cent.

9.47 Other specified items of medical equipment are charged to customs duty a 40 per cent. This rate is also applicable without reference to the type of importer (Notification No.65/88 dated 1.3.88). Parts of such medical equipment are charged to 25 per cent duty (Notification No.66/88 dated 1.3.86).

9.48 Parts relating to another specified list of medical equipment are permitted at 45 per cent duty. When these are imported complete, the duty leviable is 85 per cent (Notification No.165/86 dated 1.3.86).

9.49 Yet another notification provides that non-electronic parts of medical electronic equipment will be charged the same rate of duty as is applicable to complete equipment (Notification No.235/83 dated 18.8.83).

9.50 In addition to the above, Government and other charitable hospitals (the conditions to be satisfied are prescribed in the notifications, which in our view are impractical to administer) are permitted duty free import of all equipment, apparatus, etc., provided the goods are such as are not manufactured in India. A large number of items of medical equipment are imported under this provision (Notification No.63 and 64/88, both dated 1.3.98).

9.51 Obviously, the present duty scheme is highly complicated, not adhering to one of the basic principles of fixing the tariff rates, viz., the raw material and intermediate goods should have a duty rate less than that for complete equipment. This anomalous duty structure discourages the manufacture of medical equipment in the country. In addition, this violates the criterion of neutrality, interferes with the choice of user and also leads to inefficient use of resources in the economy. The Committee is, therefore, of the view that no medical equipment should be permitted duty free. All equipment should carry an import duty of 20 per cent. Parts of

medical equipment may be permitted at the same rate as is applicable on the medical equipment to encourage the domestic manufacture. The Committee is also of the view that all medical equipment, whether electronic or non-electronic, should be treated on par.

Instruments and Apparatus

9.52 Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus and parts and accessories thereof are covered by Chapter 90 of the First Schedule to the Customs Tariff Act. These goods attract customs duty rates ranging from nil to 110 per cent. The duty rates for parts and accessories are very complex, which vary not only from instrument to instrument but also on the consideration whether accessories contain electronic parts or not. Moreover, parts generally attract a rate of duty different from the one applicable to accessories. We do not find any justification to have such a variation in duty rates. We are of the view that a uniform rate should be applicable to parts and accessories. The distinction based on whether accessories contain electronic or non-electronic part should also be removed early.

9.53 Further, different instruments attract different rates of duty and a number of instruments and parts have been granted exemption based on end-use or end-user criterion. The major portion of goods covered by Chapter 90 are instruments and apparatus used in industry for quality control, testing, checking, etc. These are generally charged to duty at levels higher than the machinery rate for which there is no specific justification.

Quality control, testing, checking, etc., are important steps in the production of goods and services. We are of the view that duty rates on these instruments and apparatus should be brought down to the level of 30 per cent. In some cases, the rates of duty on parts and accessories are higher than those on the complete instruments or apparatus. This anomaly should be removed. Generally, these instruments contain electronic as well as non-electronic parts. We have separately recommended that duty on electronic components should be brought down to 30 per cent. We, therefore, recommend that the duty rates on all parts and accessories of such instruments or apparatus should be lowered to 30 per cent by 1997-98. Consumer electronic goods covered by Chapter 90 of Customs Tariff may be subjected to the peak rate of 50 per cent as applicable to other consumer durables.

Structure of Import Duties Recommended for 1997-98

9.54 The broad structure of duties recommended for the electronic industry is as follows:

Raw materials	20 per cent
Piece-parts, components, sub-assembly and equipment	30 per cent
Machinery/project imports for electronics industry	20 per cent
Medical equipment	20 per cent
Instruments and apparatus	30 per cent.

TABLE 9.1**Production of Electronic Equipment and Components**

(Rs. crore)

Item	1987	1988	1989	1990	1991	Growth rate (1987-1991)
Consumer electronics	1820	2400	2850	2938	3000	12.8
Industrial electronics	685	935	1210	1400	1410	20.3
Computers	375	486	700	820	830	23.5
Communication and broadcast equipment	710	900	1425	1630	1935	29.7
Strategic electronics	300	390	500	570	519	15.9
Electronic components	700	1025	1440	1520	1750	24.9
Export processing zone	130	164	234	322	281	24.8
Total	4720	6300	8309	9200	9725	20.02

Source: Annual Report, 1991-92, Department of Electronics, Government of India.

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TABLE 9.2**Sectoral Breakup of Export of Electronics****(Rs. crore)**

Item	1987	1988	1989	1990	1991	Growth rate (1987-1991)
Consumer electronics	30.3	47.7	57.0	84.0	121.0	39.60
Industrial electronics	64.0	52.0	87.0	116.0	81.0	13.58
Computers	40.7	137.8	243.0	297.5	177.0	44.90
Communication and broadcast equipment	10.5	8.5	11.0	18.5	13.0	12.80
Electronic components	96.0	128.0	229.0	214.0	178.0	19.10
Computer software	75.0	101.0	157.0	200.0	330.0	45.80
Total	312.0	475.0	784.0	930.0	900.0	32.19

Source: Annual Report, 1991-92, Department of Electronics, Government of India.

TABLE 9.3

Electronics Industry - Customs Duty - A Comparison

S.No.	Item	August 1983	June 1986	March 1988	October 1992
General					
1.	Raw materials	0,15.45%	30%	35% + CVD	40% + CVD
2.	Piece-Parts and consumables	Above 15%	45%	50% + CVD	60% + CVD
3.	Electronic components	75%	75%	80% + CVD	80% + CVD
4.	Non-electronic parts of telecom equipment	25%-150%	25%-150%	100%	95%
5.	Electronic equipment (broadcasting, telecommunication, industrial, etc.)	25%-176%	25%-176%	80%	50%
Capital Goods					
6.	Project imports	25%	30%	50%	50%
7.	Capital equipment for modernisation and balancing	25%	55%	50%	50%
8.	Moulds, tools, dies	100%	100%	30%	50%

TABLE 9.4
Input Co-efficients

(in per cent)

Product	Produced from			
	Raw materials	Piece parts	Components	Sub-assembly
Piece parts	45			
Components	30	70		
Sub-assemblies	12	40	60	
Finished products	10	33	50	85



TABLE 9.5**Effective Rates of Protection at Current Duty Rates**

(in per cent)

Product	Nominal duty rates	Effective rates of protection			
		Raw mate- rials	Piece parts	Compo- nents	Sub- assembly
Raw-materials	40				
Piece parts	60	76			
Components	80	97	127		
Sub-assemblies	110	120	143	155	
Finished products	110	118	135	140	110



REVIEW OF NOTIFICATIONS GRANTING EXEMPTION FROM CUSTOMS DUTY

10.1 In the Interim Report we had emphasised the need for having a stable rate structure and for doing away with what we referred to as the 'notification raj'. We had also recommended that the existing exemption notifications should be reviewed and end-use exemptions should be eventually removed. A review of the notifications granting exemptions from customs duty has since been undertaken. In this Chapter, we are giving a brief resume of our findings and recommendations.

10.2 The notifications granting exemption relate to basic customs duty alone, basic duty and CVD, auxiliary duty or CVD. Some of the notifications relate to the import of specified goods by all importers and some to specified goods or all goods by particular importers. Illustrations of the latter type are those relating to imports by diplomats, passengers, etc. These are mostly of goods of non-commercial nature and the volume of imports and revenue implication, except in the case of passengers' baggage, are not likely to be substantial.

10.3 A review of all the notifications relating to exemption from customs duty was made on behalf of the Committee by groups of senior officers of the Customs and Central Excise Department, whose services were made available by the Central Board of Excise and Customs. We have scrutinised the reports prepared by these groups. Broadly our recommendations in regard to these notifications are given below:

- a. General notifications such as those relating to export incentives (Advance Licenses, FTZ's, etc.) may be continued. However, notifications relating to different Free Trade Zones can be merged into a single notification,

as the procedure for availing of the exemption is common for all such notifications.

- b. Notifications granting partial exemption in regard to specified commodities falling under a particular sub-heading or heading can be kept under review and as and when the tariff rates are brought down on the recommendations of the Committee, to the level or below the level indicated in the notifications, these may be rescinded. In many cases, making distinctions among goods covered by a particular sub-heading may not be necessary, once the tariff has been substantially reduced.

- c. There will be a few notifications granting exemptions from duty, where for administrative reasons the notifications may have to be continued as the characteristics of the imported goods would not lend themselves to classification under a particular sub-heading or heading or chapter of the Tariff but at the same time it is considered necessary that a preferential treatment is warranted. Such occasions arise because of the nature of the commodity classification code in use, in terms of which goods of different types will get classified under the same sub-heading, the tariff description being very broad. One such instance is Notification No.251/92 dated 31.7.92 fixing concessional rate of duty to drug intermediates for manufacture of life saving drugs. In the tariff, the drug intermediates are classified as organic chemicals and there may not be a case for granting the concessional rate to all such chemicals.

- d. There are some notifications granting exemption to goods classifiable under different headings of the Tariff but where a uniform treatment is warranted due to administrative reasons or otherwise. Illustrations of this type of notifications are gift parcels, baggage and goods of Indian origin imported after repairs.

10.4 In addition to the above, the Committee reviewed all notifications relating to exemption from CVD, with or without exemption from basic duty. As we have stated earlier, normally there should not be any exemption from CVD inasmuch as such exemption discriminates against the domestic manufacturers producing these items. From an analysis of the notifications relating to CVD we find that these can be broadly classified into three categories:

- a. Notifications relating to commodities, mainly inputs, the deletion of which will not generally result in any variation in the incidence of duty due to the operation of Modvat;
- b. Notifications relating to commodities other than those at 'a' above - mostly items of machinery, the withdrawal of which will result in increase in the duty incidence since the commodities are outside the Modvat regime.
- c. Notifications relating to imports by different industries, institutions, etc.

10.5 Annexure X.1 gives a list of these three categories of notifications in three parts as stated above.

10.6 As regards notifications listed in Part A, the inputs would be eligible for Modvat credit provided the finished products pay excise duty. These notifications can be rescinded. Illustrations in respect of such exemptions are those relating to ethylene, N-paraffin, VCM and EDC.

10.7 As regards the notifications listed in Part B, immediate withdrawal of the CVD exemption will have the effect of increasing the total duty incidence on the commodity. The rescinding of these notifications will have to be fitted into the pattern of reduction of the basic customs duty, for which we have made separate recommendations.

10.8 Notifications in Part C relate to groups of commodities with emphasis on the importer. Here the Committee is of the view that as far as possible, instead of complete exemption from CVD for imports, a lower excise duty should be fixed for the same goods when manufactured within the country so that imported goods also enjoy the same benefit in relation to CVD automatically. Once this is done, these notifications can also be rescinded.

10.9 In some cases exemption from CVD is desirable from the administrative angle, for example, baggage, post parcels, gifts by post, personal importation of life saving drugs, equipment etc., where it is administratively convenient to have a single rate of CVD so that customs clearance does not present any problem due to the need for calculation of CVD in respect of individual items. Such notifications may have to be continued.

10.10 In addition to notifications reducing the rate of duty, there are notifications which provide for suitable adjustment of assessable value, like in the case of copper imported after exporting copper reverts or concentrate and in the case of goods cleared at the Internal Container Depots (ICD).²¹ Some notifications and regulations other than those issued under section 25 of the Customs Act are also important from tariff point of view. Two illustrations are the Project Import Regulations and the notification issued under section 65 of the Customs Act in regard to raw materials imported for manufacture under bond. Besides, there are notifications fixing specific duty for a particular item, covered by a sub-heading having a general description.

All such notifications may have to be continued.

10.11 In some cases, the exemption from duty can be provided by making a suitable entry in Chapter 99 of the Tariff. Exemption to challenge cups, medals and trophies won abroad and exemption to appliances and apparatus for the blind and deaf fall in this category. There will be a case for continuing the exemption from CVD in respect of the goods covered by the whole Chapter.²²

10.12 As regards notifications relating to duty exemption from auxiliary duty, all these will become redundant and can be rescinded once our recommendation regarding merger of basic duty with auxiliary duty is implemented.

10.13 The Committee would urge

that all the notifications may be gone into thoroughly and the modifications suggested by us are brought about as early as possible.

10.14 In the Interim Report, we had recommended issue of a Tariff Guide giving the classification of all commodities. Such an index will provide a code for purposes of computerisation. This code can have all the six digits of the sub-heading and three additional digits. The exemption notifications which will have to be continued should be reformatted in such a way that the notifications themselves give the code numbers. Where the notifications relate to goods of a general description covered by more than one chapter, a suitable coding system will have to be evolved. A coding system is essential to get the full benefit of computerisation, including monitoring the extent of utilisation of the concessional rates and the revenue implication.



**List of Notifications Relating to Exemption from
Countervailing Duty
(Paragraph 10.6)**

Part - A

S. No.	Notification No.	Brief particulars
1.	260/76	Hollows imported for manufacture of seamless steel tubes to be supplied for use in the manufacture of industrial and power boilers
2.	88/77	Acrylic yarn
3.	29/79	Specified goods for the leather industry (pigment, dyes, etc.)
4.	224/81	Vinyl chloride monomer for manufacture of PVC resins
5.	103/81	Steel tubes for manufacture of gas cylinders
6.	210/82	Raw material and components for manufacture of goods to be supplied to I.D.A., I.B.R.D., etc.
7.	295/83	Titanium sponge for manufacture of titanium and titanium alloy products
8.	2/83	Permanent magnet field d.c. Motors for manufacture of electrically operated two or three wheeled motor vehicles
9.	243/84	Ethylene dichloride
10.	219/84	Waste paper or paperboard for manufacture of pulp for use in paper or paper-board making
11.	222/84	Nickel oxide sintered
12.	48/84	Computer numerical control system for use in machines tools
13.	224/85	Specified goods for the leather industry (soles, pattern, etc.)
14.	76/85	Components of fuel injection equipment
15.	77/85	Fuel-injection equipment
16.	78/85	Sub-components (other than raw material) for manufacture of components of fuel injection equipment

S. No.	Notification No.	Brief particulars
17.	58/85	Homoeopathic medicines
18.	74/85	Components of fuel efficient commercial motor vehicles for providing after sale service
19.	30/85	Polyester filament yarn above 750 deniers
20.	276/85	Polyester fibre for manufacture of low price fabrics
21.	513/86	Raw materials & components required for the manufacturer of goods to be supplied to the ONGC, GAIL or Oil-India
22.	386/86	Specified goods for manufacture of leather chemicals
23.	335/86	Filter paper for manufacture of tea bags
24.	501/86	Narrow elastic tapes
25.	482/86	Sponge iron for use in electric arc furnace or induction furnace
26.	178/86	Sodium hydroxide in aqueous solution
27.	498/86	Sodium hydroxide solid
28.	155/86	Parts imported for the purpose of setting up or assembly or manufacturer of specified articles falling under Chapter 84 or 85
29.	158/86	Components imported for manufacture of certain specified textile machinery
30.	397/86	Parts of computer numerical control systems
31.	165/86	Components required for manufacture of specified electromedical equipment
32.	245/86	X-ray cameras designed for diagnostic & surgical purposes
33.	346/87	Paraffin imported for manufacture of linear alkyl benzene
34.	52/87	Di-iso-butylene, heptene, nonene, hexene, and mixed octene for the manufacture of the oxalcohols
35.	20/88	Specified raw materials for manufacture of specified goods (power equipment, electrical machinery, etc.)
36.	240/88	Un-wrought nickel

S. No.	Notification No.	Brief particulars
37.	60/88	Non-electronic parts required for manufacture of electronic equipment covered by Notification No. 59/88
38.	66/88	Component parts of electro-medical equipment covered by Notification No. 65/88
39.	33/88	Goods (other than raw material) imported for manufacture of specified components of fuel-efficient lcvs of payload not exceeding 4000 kg.
40.	144/88	Sight saving equipment and their accessories & spare parts
41.	179/88	Parts of sight saving equipment covered by Notification No.144/88-Cus
42.	296/88	Specified goods imported for manufacture of drugs and harmones
43.	200/89	Ethylene
44.	97/89	Parts required for manufacture of specified instruments
45.	267/89	Specified goods for use in leather industry
46.	5/89	Specified goods for manufacture of button cells
47.	24/90	Vegetable saps and extracts of a kind used in homoeopathic medicines
48.	171/90	Specified items of polyethylene and copolymers of ethylene and polypropylene and copolymers of propylene for manufacture of aseptic packing material for packing of pharmaceuticals
49.	281/90	Pulp other than rayon grade wood pulp
50.	282/90	Rayon grade wood pulp
51.	262/90	Specified goods imported for the readymade garment or hosiery industry
52.	97/90	Components for manufacture of specified electronic textile testing equipment
53.	211/90	Cotton yarn, cotton terry towel fabrics and cotton terry towels
54.	134/91	Raw material and components for manufacture of capital goods to be supplied to the fertilizer plants
55.	57/91	Zirconium oxide and yttrium oxide for manufacture of raw cubic ziconia

S. No.	Notification No.	Brief particulars
56.	59/91	Thio cyano methyl thio benzothiazole (TCMTB), para chloro meta cresol (PCMC) and formulations containing any one or both of these chemicals for use in the industry
57.	93/91	Computer peripheral devices for manufacture of computer system to be supplied to a research institute
58.	97/91	Components required for manufacture of specified machines for electronic industry covered by the Notification No. 96/91
59.	87/91	Specified components of arc tubes for high pressure sodium vapour lamps
60.	243/92	Wood pulp other than rayon grade wood pulp for manufacture of newsprint
61.	89/92	Flanged radial bearings for manufacture of wheel chairs
62.	86/92	Parts required for the purpose of initial setting up, assembly or manufacture of specified textile machines
63.	87/92	Parts required for the purpose of the initial setting up, or for the assembly or manufacture of machine tools
64.	145/92	Components of fuel-efficient Light Commercial Vehicle (LCV)
65.	146/92	Components of fuel-efficient LCV employing indirect injection engines
66.	221/92	Components for manufacture of fuel-efficient motor cars of engine capacity exceeding 1000 c.c.
67.	222/92	Components for manufacture of fuel-efficient motor cars of engine capacity not exceeding 1000 c.c.
68.	223/92	Components for manufacture of fuel-efficient four-wheeled cross-country motor vehicles
69.	224/92	Goods (other than raw-materials) required for manufacture of specified components of fuel-efficient motor cars
70.	225/92	Goods (other than raw-materials) for manufacture of components of fuel-efficient four-wheeled cross country motor-vehicles
71.	231/92	Components of motor vehicles for manufacture of motor vehicles of engine capacity not exceeding 1000 c.c.
72.	232/92	Goods (other than raw materials) for manufacture of components of motor vehicles of engine capacity not exceeding 1000 c.c.

Part - B

S. No.	Notification No.	Brief Particulars
1.	268/76	Project imports
2.	106/77	Specified articles required for mining
3.	42/78	Specified machines for leather processing and finishing industry
4.	43/78	Automatic spraying machine for leather processing and finishing industry
5.	243/78	Exhaust emission measuring equipment and other instruments for testing in automotive industry
6.	9/79	Spinnerettes made of ceramic or glass
7.	14/79	Tea bag machines
8.	114/80	Specified machines for the printing industry
9.	113/81	Power operated briquetting presses for compacting cellulosic waste material into fuel briquettes, and parts and accessories thereof
10.	315/83	Electronic project imports
11.	256/84	Gibberellic acid
12.	16/85	Specified machines designed for garment or hosiery industry
13.	123/85	Specified wireless apparatus accessories and components imported by a licensed amateur radio operator
14.	314/85	Moulds and dies for manufacture of artificial plastic articles
15.	6/86	Specified equipment imported for initial setting up of a hotel or expansion of a hotel
16.	125/86	Specified food processing/packing machines
17.	154/86	Machine tools
18.	159/86	Specified gem and jewellery machinery/equipment
19.	160/86	Specified machinery for marine products industry
20.	343/86	Moulds, tools and dies for electronic industry
21.	390/86	Machines for coffee industry

S. No.	Notification No.	Brief Particulars
22.	514/86	Goods required for HBJ gas pipe line project
23.	2/87	Specified solvent extraction machinery
24.	28/87	Specified type of paper for printing of newspapers, books or periodicals
25.	59/87	Machinery covered by specified headings/description of Chapter 84 or 85
26.	62/87	Ladder, platforms & pumps imported by fire services
27.	63/87	Specified goods for the initial setting up of a unit, or for the substantial expansion or for the modernisation of an existing unit of caustic soda plant based on membrane cell technology
28.	64/87	Specified foundry machines
29.	71/87	Specified sophisticated textile machinery
30.	80/87	Specified equipment for electronic R&D units
31.	122/87	Machinery falling within Chapter 84 or 85 for manufacture of contraceptives
32.	317/87	Specified machinery, falling under Chapter 39, 69, 82, 84, 85, or 90 for specified industry for technology upgradation
33.	332/87	Lithium carbonate for energy saving and pollution control in manufacture of aluminium
34.	21/88	Specified machinery for woolen industry
35.	22/88	Specified machinery for manufacture of bicycles and components thereof
36.	23/88	Specified machinery for the silk industry
37.	24/88	Specified machinery for processing and packaging of tea
38.	25/88	Specified machinery for manufacture of newsprint
39.	26/88	Specified machinery for use in the manufacture of rolling bearings
40.	28/88	Book binding machinery imported by a newspaper establishment
41.	29/88	Four colour and above four colour sheetfed offset printing machine imported by a newspaper establishment
42.	30/88	Specified machinery/equipment for energy conservation

S. No.	Notification No.	Brief Particulars
43.	57/88	Machinery and instruments for manufacture of rural automatic exchange (RAX) equipment
44.	59/88	Specified communication/broadcasting/studio equipment
45.	148/88	Outboard motors for fitments on boats used for fishing operations
46.	183/88	High speed hard gelatine capsule making machines
47.	250/88	Moulding, extruder and collapsible tube making machines
48.	288/88	Jigs, fixtures, dies moulds, etc., for manufacture of auto-components
49.	333/88	Specified goods imported in connection with on-shore oil exploration or exploitation
50.	18/89	Rubber surgical glove making plant
51.	40/89	L-lysine, L-lysine mono hydrochlorides, D-L methionine and methioninehydroxy analog for manufacture of poultry feeds
52.	62/89	Specified machinery, equipment for manufacture of rubber and canvas footwear
53.	64/89	Machinery for manufacture of fishing nets
54.	66/89	Machinery, tools or instruments required for manufacture of fuel-injection equipment
55.	68/89	Specified equipment for safety in chemical industry and environmental pollution control
56.	69/89	Specified machinery/equipment for seed development sector
57.	71/89	Machinery for leather footwear manufacture
58.	72/89	Machinery for the garment and hosiery industry
59.	73/89	Lyophiliser (freeze drier), required for the immunisation programme
60.	98/89	Specified machines for manufacture of high pressure sodium vapour lamps
61.	152/89	Modern automatic high speed circular looms for jute
62.	179/89	Membranes imported for replacement of worn out membranes in an industrial plant based on membrane cell technology
63.	196/89	Specified goods imported in connection with off-shore oil exploration or exploitation

S. No.	Notification No.	Brief Particulars
64.	228/89	Lyophilizer (freeze drier) for manufacture of antibiotics
65.	235/89	Newsprint for the printing of newspapers, books and periodicals
66.	64/90	Grape guard for use in the packing of grapes
67.	93/90	Die anvil and die inner for manufacture of synthetic industrial diamonds
68.	94/90	Specified machinery and equipment for forged hand tool industry
69.	95/90	Specified equipment for manufacture of rubber belts
70.	96/90	Aseptic form fill seal machines for use in the pharmaceutical industry
71.	101/90	Liquid nitrogen plant having a capacity upto ten litres per hour and accessories and spares thereof
72.	104/90	Specified quality control equipment
73.	216/90	Photo-composing/photo-typesetting systems used in printing industry
74.	217/90	Photo composing machines and keyboards imported by news paper establishments
75.	230/90	Melton cloth for manufacture of footballs or tennis balls
76.	296/90	Machinery and equipment for generation of electric power (including generating sets) of a capacity 1 mw and above for captive use
77.	1/91	Specified machinery and accessories imported by manufactures of jute products
78.	84/91	Specified machinery/equipment for livestock breeding programme
79.	96/91	Specified capital goods for electronic industry
80.	105/91	Adventure sport equipment
81.	133/91	Roundabouts, swings, etc. For setting up of amusement parks
83.	88/92	Dyeing machines for garment and hosiery industry and industrial sewing machines for leather and footwear industry and parts thereof
84.	100/92	Machinery and equipment for generation of electric power (including generating sets) of capacity 1 mw or above
85.	104/92	Crash tenders and similar other appliances for fire fighting operations

Part - C

S. No.	Notification No.	Brief Particulars
1.	70/81	Scientific/technical instruments, parts, components or accessories and computer software, etc., imported by approved non-commercial research institutions
2.	208/81	Life saving drugs, medicines or equipment
3.	127/82	Specified goods imported in connection with petroleum operations to be under taken under a contract with a foreign company
4.	321/87	Consumable goods & spare parts required by any research institute registered with the Department of Scientific and Industrial Research (D.S.I.R)
5.	63/88	Hospital equipment imported by government hospitals
6.	65/88	Medical equipment, accessories & spare parts
7.	229/88	Scientific instruments, apparatus, spare parts, accessories computer software etc. Imported by a public funded research institution or a university
8.	64/88	Hospital equipment imported by charitable hospitals
9.	8/89	Consumable goods imported by a public funded research institution or a university
10.	213/89	Consumable goods imported by a public funded research institute under the control of the Department of Space, Department of Atomic Energy or Department of Defence Research and Development
11.	235/90	Telecommunication and photographic equipment imported by accredited news agency
12.	153/91	Consumable goods imported by the Council of Scientific and Industrial Research (C.S.I.R.) Centre for Biochemicals
13.	99/92	Navigational communication, airtraffic control and landing equipment and spares for the maintenance of such equipment imported by the national airport authority of india or the international air port authority of india

RESTRUCTURING CENTRAL EXCISE DUTIES

11.1 The quintessential guiding principle in all our tax reform recommendations was that the tax system should be broad-based and simple, broadly neutral and with moderate rates. Making ground for moving towards a full-fledged VAT was, therefore, the central theme in our recommendations²³ regarding reform of the excise duty system - for, a rational tax regime with a small number of moderate rates is the very essence of an ideal value added tax system. It is against this background that the Committee had designed a three-rate Modvat (later VAT) regime at the manufacturing level at 10, 15 and 20 per cent with selective or sumptuary excise on non-essential commodities at 30, 40 or 50 per cent. The Committee had also suggested that the maximum excise duty rate on a commodity should not exceed 50 per cent with a few exceptions like cigarettes.²⁴ Such a regime would, apart from being simple and less distortive, eliminate disputes and minimise attempts at evasion by the assesseees and discretionary action by tax collectors.

11.2 In this Chapter, we indicate the structure of Central excise duties for different commodities in the Central Excise Tariff Schedule in line with the aforesaid recommendations. Annexure XI.1 gives the recommended excise duty rate structure. In respect of non-essential commodities like glazed tiles, air-conditioners and cosmetics, we are recommending the levy of sumptuary excise of 10, 20 and 30 per cent for which no Modvat credit shall be available in addition to the Modvat rate of 20 per cent. We would like to explain that what is suggested in the Annexure is a broad pattern of duty on commodities covered by different chapters of the Central Excise Tariff. Within a chapter, there may be a few items requiring a special treatment, which is the case even at present. Some of these special rates may have to continue. We have not indicated all such

cases. We are also not indicating the duty structure for petroleum products, textiles, matches, cigarettes and bidis. As regards textiles, we had suggested extension of Modvat - immediately to cotton textiles and gradually to other sectors in the industry, in Chapter 4 of Final Report (Part I). We reiterate that the duty structure of the textile industry should be reformed in line with our earlier recommendations. The match excise, on other hand, has a unique regime which is guided by the policy of the Government to protect thousands of small and cottage sector units.²⁵ Match excise would not, therefore, fit into the Modvat scheme. We have suggested reconsidering the need for continuing with the banderol system of collection of duty in the case of matches. We are also not making any recommendation regarding bidi and cigarette excise keeping in view sumptuary and revenue considerations and also because the tax on tobacco does not materially affect the other sectors of the economy. In the case of cigarettes, we have recommended examination of the feasibility of collection of excise duty through banderols as an anti-evasion measure.

11.3 The petroleum products are under the administered price regime. Therefore, the excises on them cannot be considered for rationalisation independently of that regime. However, in paragraph 3.40 of this Report, we have suggested extension of Modvat to products of the petroleum group which are inputs in the manufacture of petrochemicals. There is no reason for keeping such petroleum products, for example, naphtha and gases, outside the scheme of Modvat.

11.4 As we have said earlier, broadening the tax base is the key to designing a rational tax regime with moderate rates. The present Central excise duty structure, however, presents a bizarre pattern with a number of rates varying from 0 to 105

per cent (even higher in the case of cigarettes) with an additional special excise duty of 15 per cent in many commodities and a large number of commodities remaining outside the excise net. Annexure XI.2 gives a representative list of commodities which are at present fully exempt from excise duties, which we propose should be brought within the excise tax net and ultimately be integrated into the three rate Modvat (and later VAT) regime that we have proposed.²⁶ Some of them, such as skimmed milk powder for infants, fertilisers, pesticides, insecticides, newsprint, could have a lower rate of duty of 5 per cent to start with, and then they may be integrated into the main structure at an appropriate time. We may point out here that today most of these exempted commodities are not free of tax because they bear the cumulative excise duties levied at the input stage. Therefore, if they are subjected to a duty of 5 per cent and a credit of duty paid on their inputs is allowed, the net additional incidence will be quite low. The revenue however, will gain substantially in due course with the expansion of consumption. We are, however, aware that many of these commodities have been exempted having regard to the administrative problems of controlling a large number of small units manufacturing these items in the unorganised sector. This is why, while suggesting the levy of excise duty on an illustrative list of about 35 commodities which are exempt from excise duty, the Committee had recommended that such duties could be assessed initially under the Simplified Assessment Procedure (SAP) outlined in paragraph 9.16 of the Interim Report²⁷. We suggest that the commodities listed in Annexure XI.2 could be brought under the excise net initially under the SAP scheme and ultimately under the normal procedure.

11.5 We are of the view that the excise duty rate structure suggested by us above would not result in any loss or deceleration in the growth of excise revenue for a number of reasons. First, a large number of new commodities have been proposed to be brought under the tax net and some of them

such as cycles, cycle tyres, ready-made garments, articles of plastics, pressure cookers, water coolers, thermowares, electric bulbs, sewing machines, etc., have significant revenue potential on account of large turnover in their cases. Besides, there will be a significant spurt in the collection of CVD particularly from fertilisers and their inputs such as phosphoric acid and pesticides and their intermediates which are at present subjected to nil CVD since they are fully exempt from excise duty. Second, we are not suggesting any change in the duty structure for cigarettes and petroleum products which together account for about 25 per cent of the total excise revenue earnings including cess on crude oil. Third, the prices of some of the commodities like synthetic fibre and yarn, cosmetics and toilet preparations, airconditioners, etc., are likely to come down in case the excise duty structure is reformed on the lines suggested above, and in that case, there will be significant buoyancy in the demand for them. The increased production and greater compliance of the assesseees will probably more than neutralise the loss in revenue due to the reduction in the rates of excise duty in respect of these commodities. The tax on services which we have proposed in the Interim Report should also yield substantial revenue²⁸

11.6 We wish to conclude by making what we consider to be two extremely important points. First, the need for reforming the structure of Central excise duties has now assumed added importance in the context of our recommendations in the preceding chapters for substantial reduction in the import tariff and the growing acceptance of the virtues of removing non-tariff barrier even for consumer goods. Obviously, the domestic producers would be hit if the excise duty structure is not reformed simultaneously with the proposed reforms in the import tariff and policy. While arguing the case for reduction in the excise duty for textile fibre and yarn and for extension of Modvat to textiles by bringing the fabrics under excise duty net, we had explained how the domestic producers of fabrics will be hard

hit if the proposed reforms in the import tariff and policy are carried out without simultaneously reforming the present irrational excise duty regime for the textile industry.²⁹ Secondly, it would be impossible to administer the kind of broad-based excise duty system that we have in view with the prevalent administrative system, which includes approval of price list, classification list and clearance on the basis of pre-authenticated gate pass. We had already suggested that the system of approval of price list and classification list must be dispensed with and the assessee should be required to merely intimate the classification of the product and the value for the purpose of excise duty. As regards classification, the doubts and disputes would almost disappear with the implementation of the proposed simplified excise duty regime with only six rates (with some exceptions) and with stability in the rate structure. We had also observed that it should be possible to switch over to the mode of assessment based on invoice price which the department has to

adopt ultimately in almost all cases covered by Modvat. This is an extremely important part of our recommendations on reforming the excise tax system and we are of the view that invoice mode of assessment should be immediately introduced at least for industrial inputs covered by the existing Modvat system. The problem of undervaluation would be considerably reduced by adopting the invoice method of assessment and the low rate structure that we have proposed and with the extension of Modvat to the wholesale stage as we have recommended in Chapter 4 of Final Report (Part I).³⁰ We would strongly reiterate our earlier recommendation that the existing procedures for collection of duty should be reviewed thoroughly and these should be updated and simplified.³¹

11.7 The full extension of Modvat as recommended in the Final Report (Part I) and the restructuring of excise duty rates should be carried out over the period of next 3-4 years.

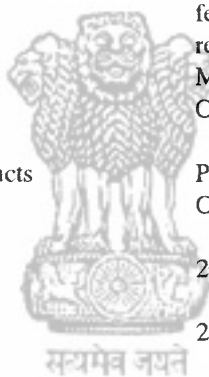


Recommendations regarding Restructuring Excise Duties

S.No.	Chapter No.	Description	Proposed duty rate
1.	2	Meat and edible meat offals	Nil
2.	3	Fish and Crustaceans	Nil
3.	4	Dairy produce, edible products of animal origin not elsewhere specified	Milk and cream concentrated, condensed milk and milk powder (Sub-heading No. 0401.11, 0401.12 & 0401.14) - 10%; All others - 15%
4.	5	Products of animal origin not elsewhere specified or included	10%
5.	7	Edible vegetables put up in unit containers	10%
6.	8	Edible fruits and nuts put up in unit containers	15%
7.	9	Coffee and tea; spices put up in unit containers	Coffee and tea - the existing specific rates to be revised upward, as suggested in the Interim Report; Spices - 10%
8.	11	Malt and starches	10%
9.	13	Lac; gums, resins and other vegetable saps and extracts	10%
10.	14	Vegetable plaiting materials; Vegetable products, not elsewhere specified	15%
11.	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	15%

S.No.	Chapter No.	Description	Proposed duty rate
12.	16	Preparation of meat, fish etc., put up in unit container	10%
13.	17	Sugar and sugar confectionery	10%
14.	18	Cocoa and cocoa preparations	20%
15.	19	Preparations of cereals, flour, starch or milk; pastry cooks'	Preparation of cereals for infant use - 10% Others - 15%
16.	20	Preparations of vegetables, fruit, nuts or other parts of plants	15%
17.	21	Miscellaneous edible preparations	Pan masala - 40% Others - 15%
18.	22	Beverages, vinegar and spirit	Aerated water - 20% Others - 15%
19.	23	Residues and wastes from food industries, animal fodder	Animal fodder put up in unit container - 10%; Others - Nil
20.	25 & 26	Mineral products	Portland cement - 20%; White cement - 30% Marble - The existing specific rate to be revised upward as suggested in the Interim Report
21.	28	Inorganic chemicals	15%
22.	29	Organic chemicals	Bulk drugs - 10%; Others - 15%
23.	30	Pharmaceutical products	Medicines for National Health Programme - Nil; Other medicines - 10%, including medicines of indigenous system based on drugs
24.	31	Fertilisers	10%

S.No.	Chapter No.	Description	Proposed duty rate
25.	32	Dyes, pigments and paints	Pigments and colouring matter - 15%; Paints and dyes - 20%
26.	33	Cosmetic or toilet preparations,	Items carrying basic duty of 105% at present - 50% Others - 20%
27.	34	Soap, organic surface-active agents, etc.	OSAA - 20%; Others - 15%
28.	35	Glues, adhesives, etc.	20%
29.	36	Explosives, pyrotechnic products, etc. (Other than matches)	20%
30.	37	Photographic or cinematograph goods	Cinematograph films - Existing specific rates to be revised upward. The specific duty regime for features films withdrawn in 1989 budget to be re-introduced. Medical X-ray films - 10%; Other photographic films - 20%
31.	38	Miscellaneous chemical products	Pesticides, insecticides etc. - 10%; Others - 15%
32.	39	Plastics and articles thereof	20%
33.	40	Rubber and articles thereof	20%
34.	41	Leather	15%
35.	42	Articles of leather	20%
36.	43	Manufactures of fur skin and artificial fur	20%
37.	44	Wood and articles of wood	Wood - 10%; Veneered sheets, particle boards etc. - 15%; Plywood - 20%.
38.	45	Cork and cork articles	20%



S.No.	Chapter No.	Description	Proposed duty rate
39.	46	Manufactures of straw, of other plaiting materials, etc.	15%
40.	47	Wood pulp, waste and scrap of paper, etc.	10%
41.	48	Paper and paper board	Newsprint, hand made paper paper from bagasse - 10%; Other paper and paper board - 20%
42.	49	Products of the printing industry	Newspapers, books and manuscripts - Nil; Others - 10%
43.	64	Footwear and parts thereof	20%
44.	65	Head gear and parts thereof	20%
45.	66	Umbrellas, walking sticks, etc.	15%
46.	67	Articles of flowers and articles of human hair	20%
47.	68	Articles of stone, cement, asbestos, etc.	15%
48.	69	Ceramic products	Clay bricks, roofing tiles, stoneware, ceramic tableware, kitchenware, other household articles (e.g., water filters) and toilet articles, sanitary fixtures other than of porcelain or china - 10%; All articles of porcelain or china - 30% Glazed tiles - 40%
49.	70	Glass and glassware	20%
50.	71	Pearls, precious stones, etc.	15%
51.	72 to 81	Ferrous and non-ferrous metals	All metals including their wastes, waste and scraps - 10%; Articles of metals - 15%
52.	82	Tools, implements, cutlery, etc.	Agricultural implements - 10%; Others - 15%

S.No.	Chapter No.	Description	Proposed duty rate
53.	83	Miscellaneous articles of base metal	20%
54.	84	Machinery and equipment	General machinery - 10%
55.	85	Electrical machinery and equipments	Domestic appliances - 20%; Consumer electronic goods - 30% Air-conditioners - 50%
56.	86	Railway or tramway locomotives	Existing specific rates to be revised upward
57.	87	Motor vehicles, trailers, tractors, etc.	All tractors and trailers - 15%; Motor vehicles for public transport including three-wheeled autorickshaws - 20%; Motor vehicles for transport of goods - 20%; Two-wheelers - 30% Saloon cars - 50% Cycles - 15%
58.	88	Aircraft, spacecraft and parts thereof	15%
59.	89	Ship, boat and floating structures	15%
60.	90	Instruments and apparatus	Medical equipments and scientific instruments - 10%; Others - 20%
61.	91	Clocks and watches and parts thereof	15%
62.	92	Musical instruments	20%
63.	93	Arms and ammunition	20%
64.	94	Furniture, mattresses, etc.	Cellular rubber mattresses, pillows etc. - 40% Others - 20%
65.	95	Toys, games, etc.	20%
66.	96	Miscellaneous manufactured articles	Pens, pencils, buttons, etc., - 10%; Others - 20%

Note : Where the suggested rates are 30, 40 and 50 per cent, those are inclusive of sumptuary excise at 10, 20 and 30 per cent, respectively in addition to the peak Modvat excise of 20 per cent.

**List of Commodities at Present Exempt from Excise Duty,
Which could be Brought Under The Central Excise Tax Net**

S.No.	Chapter No.	Description of Goods
1.	4	Butter and cheese
2.	4	Skimmed milk powder
3.	7	Dried vegetables put up in unit container
4.	8	Edible fruits and nuts put up in unit container
5.	9	Coffee powder containing chickery in any proportion
6.	9	Spices put up in unit container
7.	11	Malt and starches
8.	13	Lac and guar gum
9.	15	Fixed vegetable oils, hardened technical oil, industrial fatty acids and acid oils, mutton tallow and vegetable fats and oils
10.	16	Preparations of meat and fish put up in unit container
11.	19	Bread, pastry and cakes; food preparations for infant use put up in unit container
12.	20	Jam, jelly, marmalade and fruit juice and vegetable juice put up in unit container
13.	21	Sauces, ketchup and like preparations put up in unit container
14.	28	Sulphuric acid, phosphoric acid, ammonia, ammonium chloride, manganese sulphate used in the manufacture of fertiliser, agricultural grade zinc sulphate
15.	29	P-xylene
16.	30	Homoeopathic, Unani, Ayurvedic and Bio-chemic medicines; cotton wool and guage cloth bandages
17.	31	Fertilisers
18.	33	Agarbatti

S.No.	Chapter No.	Description of Goods
19.	34	Sulphonated castor oil and fish oil; soap, polishes, creams, scouring powder and pastes manufactured without the aid of power
20.	37	Feature films
21.	38	Inorganic accelerators; finishing agents for textiles, pesticides, insecticides and fungicides
22.	39	Articles of plastics, polyester chips and polyamide chips;
23.	40	Tyres and tubes for bicycles, cycle rickshaws, powered cycle rickshaws, tyres for tractors of engine capacity not exceeding 1800 c.c., tyres for power tillers and animal drawn vehicles
24.	41	Chemically tanned leather
25.	42	Vanity bags; articles of leather other than suitcases, briefcases, vanity cases, executive cases, briefcases
26.	45	Cork and cork articles used in the motor vehicles or power tillers
27.	46	Mats manufactured from grass, straw, rushes and reeds; woven sacks of polyethylene or polypropylene or a combination thereof
28.	47	Wood pulp
29.	48	Converted types of paper and paper boards, corrugated paper made of imported paper, kraft paper and paper board used for packing of horticultural products, printed cartons made from specified varieties of paper, asphaltic roofing sheets
30.	65	Safety head gear and parts thereof
31.	66	Umbrellas and parts thereof
32.	68	Mosaic tiles, articles of mica
33.	69	Roofing tiles, stone and ceramic tableware, kitchenware and other households articles and toilet articles, other than of porcelain or china
34.	70	Glass envelopes for electric lighting bulbs, fluorescent lighting tubes and television picture tubes; glass inners for vacuum flasks glass ampoules and glass vials for injectables
35.	82	Hand tools used in horticulture and agriculture
36.	83	Parts of steel furniture; safes, strong boxes, cash boxes and filing cabinets manufactured without the aid of power

S.No.	Chapter No.	Description of Goods
37.	84	Internal combustion engines for tractors of engine capacity not exceeding 1800 c.c., for power tillers and for electrically operated two-wheeled and three-wheeled motor vehicles; diesel oil operated internal combustion engines for motor vehicles used solely as taxis, internal combustion engines of engine capacity not exceeding 50 c.c., diesel engines of 10 horse power and less; bicycle pumps and parts thereof, bicycle valve and its components, parts and accessories of power tillers, hand pumps and their parts, engraved copper rollers or cylinders for use in textile industry, water filters of capacity not exceeding 40 litres
38.	85	Black & white television sets, vacuum and gas filled bulbs, recorded and unrecorded audio cassettes, recorded video cassettes not manufactured directly from recorded tapes, cassette shells for audio cassettes
39.	87	Bicycles and other cycles not motorised and their parts, tractors of engine capacity not exceeding 1800 c.c., and chassis therefor
40.	88	Aeroplanes and helicopters other than those for defence purposes
41.	90	Frames and mountings for spectacles, goggles, spectacle lenses and intraocular lenses, medical and surgical instruments and apparatus, cinematograph projectors designed for projecting cinematograph films of 16 m.m. width, or of size exceeding 9.5 m.m., parts of cinematograph projectors, precision balances
42.	91	One day alarm time pieces
43.	93	Air guns, air rifles and air pistols
44.	95	Toys and sports goods
45.	96	Buttons and button blanks, pens, vacuum flasks and other vacuum vessels.

CONCLUDING REMARKS

12.1 Table 12.1, at the end of this Chapter, brings together our recommendations on the structure of tariff rates to be brought into existence by 1997-98, or if possible, by 1996-97, for the major commodities in the various groups considered in this report. The duty rates on other items which we have not considered specifically in the preceding chapters could be dovetailed with the general pattern of rates indicated in the aforesaid Table. It will be seen that the structure implements the guiding principles with which we started. The rates on finished products are kept distinctly higher than on the basic raw materials, and the rates of duty on components and machinery come in between. This structure is intended to encourage value addition activities at home, while the fairly low rates on the metals and the other basic raw materials will serve to keep the costs of production low throughout the economy. At the same time, we have endeavoured to ensure that the industries producing all the raw materials and components and machinery would be reasonably protected so that backward integration will not be hindered and that India will continue to have a diversified industrial economy.

12.2 We have assumed that even by the end of our reference period imports and exports of agricultural products would be subject to restrictions as of now and such products would in general be allowed to be imported only when domestic supplies are felt to be insufficient. We are of the view that agricultural imports when permitted also should be subject to some "protective" import duty. However, in respect of cereals like wheat and rice, the duty free tariff may continue. Other essential agricultural goods such as oil seeds and pulses could be subjected to a duty rate of 10 per cent. Non-essential agricultural products like almonds and cashew nuts are now subject to a very high rate of duty. Duty rates on them

should be brought down to 50 per cent.

12.3 The domestic prices of petroleum products are under the regime of administered prices. Since we have not considered the question of rationalisation of these prices, we have refrained from making any recommendations on excises and customs on petroleum products. Nevertheless we feel that with the opening up of the petroleum sector to private enterprise and given the wide ramifications of any duties on a petroleum product, the customs duty on crude oil, etc., should be such as to fit into the broad structure of the tariff.

12.4 In the Interim Report, we had suggested that as and when the non-essential consumer goods (mainly durable consumer goods) are removed from the negative list, they should be subjected to an import duty of 50 per cent. Since these goods will in addition be subject to CVD, the total tax burden on them will be sufficiently high to discourage imports; at the same time the unlimited protection enjoyed by the domestic manufacturers of these goods will be brought under limit. Of course, to the extent that there has been considerable smuggling of many of these goods, the degree of protection has been under some restraint. With the imports of these goods coming in legally, smuggling will go down and government revenue would gain without any additional drain on foreign exchange.

12.5 It is difficult to predict what the pattern of imports would be with the much reduced level of duties on many items, which are now highly taxed. If there is no radical change in the pattern and if consumer goods are also allowed to be imported, the import-weighted average rate of duties would be around 25 per cent. This is on the assumption that all imports will be subject to at least a minimum rate of duty.

12.6 The structure of duties that we have recommended, while taking care of the needs of industrialisation of the country, is such as to make administration vastly easier than today. With the reduction in the general level of rates, most of the notifications would become redundant and can be rescinded and the resultant reduction in the number of effective rates of import duty would all but eliminate classification disputes. Moreover, the abolition of end-use exemptions and concessional rates of duty for particularised items will ease the administrative burden and cut out delays and abuse of provisions.

12.7 Government should rigidly adhere to one basic principle, namely, while consumers should not be asked to bear undue burden through unwarrantedly high protection to particular groups of producers, domestic producers should not be exposed to unfair competition in the name of not adding anything to the cost of "essential goods". Hence we recommend that even the so-called essential goods like inputs for fertilisers and newsprint should be subjected to a minimum rate of duty, say 5 per cent, so that domestic manufacturers would get some protection. Similarly, we have suggested levy of import duty of 20 per cent in 1997-98 on medical equipments (electronic and non-electronic) for protecting the domestic manufacturers and encouraging indigenous production of medical equipments. Incidentally, if our recommendation is implemented, much of paper work and delay would be eliminated along with the abuse of existing provisions regarding exemption of equipment acquired by hospitals obtaining the required certificates.

12.8 We are aware that the duty rates that we have recommended for some groups

of commodities, for example, machinery, are higher than in several other developing as well as developed countries. We feel that low rates would not be appropriate within the medium term context that we have in view. Some of the cost disadvantages from which Indian industry suffers will be removed or scaled down when the import duties on inputs are reduced. However, disadvantages due to the inefficiencies present in the economy will remain. In some cases, scale economies have yet to be fully reaped, and in some other cases adequate time for re-structuring and adjustment must be given. The situation can be reviewed during the next decade. Meanwhile, Government should take urgent action designed to remove all of the important factors creating inefficiencies and leading to higher costs.

12.9 It will be difficult to reform the import tariff without hurting the domestic industries if the irrational excise duty regime is allowed to continue. We are of the view that it should be possible to implement the proposed restructuring of excise duties and extend Modvat fully over the period of the next three to four years without losing any revenue.

12.10 We would also emphasise the need for strengthening the administrative machinery for collection of indirect taxes on the lines suggested by us in the Final Report, Part I. Needless to say, the thorough reform of the system of domestic indirect taxes should figure high in the agenda of policies for minimising distortions and costs in the Indian economy.

TALBLE 12.1

Import Duty Structure Recommended for 1997-98

Industry	Import Duty (excluding CVD) (in per cent ad valorem)
1. Essential agricultural goods like wheat and rice	0
2. Other agricultural goods like oilseeds and pulses	10
3. Non-essential agricultural goods like almond and cashewnut	50
4. Petrochemical building blocks *	15
5. Organic and inorganic chemicals *	20
6. Polymers *	25
7. Textile fibres and yarn	25
8. Iron and steel -	
a. Pig iron	15
b. Semi and finished steel including stainless steel and other alloy steel	20
9. Copper	20
10. Aluminium	15
11. Nickel	15
12. Lead and zinc	20
13. Tin	15
14. Wastes and scrap and concentrates of ferrous and non-ferrous metals	10
15. Articles of iron and steel	30
16. Articles of non-ferrous metals -	
a. of copper, lead and zinc	30
b. of aluminium, nickel and tin	25
17. Machinery including machine tools	20 **
18. Electronics -	
a. Raw materials	20
b. Piece parts, components, sub-assembly and equipment	30
19. Instruments	30
20. Medical equipment	20

* Example of petrochemical building blocks are ethylene, propylene, butadiene, benzene, ethyl benzene and styrene. Organic chemicals will not include drugs in respect of which we are not making any recommendation but drug intermediates will be covered under this heading. Polymers include LDPE/LLDPE, HDPE, PP, PVC, PS, polyesters, synthetic and natural rubber and the whole range of plastics and synthetic resins.

** At present there is no CVD. We are suggesting 10 per cent CVD which is to be modvated over a period of four years.

**List of Organisations Who Submitted
Memorandum and Gave Evidence Before
the Tax Reforms Committee**

Organisations			
		17.	Stone India Limited, Calcutta
1.	Consumer Electronics and TV Manufacturers Association, New Delhi	18.	All India Spices Importers Exporters, New Delhi
2.	The Institute of Chartered Accountants of India, New Delhi	19.	The Fertiliser Association of India, New Delhi
3.	Association of Indian Dry Cell Manufacturers, New Delhi	20.	Instrumentation Limited, Kota
4.	Appellate Tribunal, New Delhi	21.	Punsumi India Limited, Jaipur
5.	Frick India Limited, New Delhi	22.	Pieco Electronics & Electricals Limited, Bombay
6.	Indian Electrical & Electronics Manufacturers' Association, New Delhi	23.	Uptron India Limited, Lucknow
7.	Indian Copper Wire Rod Rollers Association, Bombay	24.	Murugappa Electronics Limited, Madras
8.	McDowell & Co. Limited, New Delhi	25.	Manufacturers' Association for Information Technology, New Delhi
9.	India Magnesia Product Limited, Calcutta	26.	Steel Authority of India Limited, New Delhi
10.	Confederation of Indian Industry, New Delhi	27.	All India Manufacturers' Organisation, New Delhi
11.	Consulate General of the USA, Bombay	28.	Weston Electroniks Limited, New Delhi
12.	Federation of Indian Export Organisation, New Delhi	29.	Southern Small Scale Cosmetics & Toiletries Manufacturers Association, Madras
13.	Associated Chambers of Commerce & Industry, New Delhi	30.	Association of Man-made Fibre Industry, Bombay
14.	Federation of Indian Export Organisation, New Delhi	31.	Association of Synthetic Fibre Industry, Bombay
15.	Electronic Component Industries Association, New Delhi	32.	Grasim Industries Limited, Birlagram, Nagda
16.	Resident Mission of World Bank, New Delhi		

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| 33. Indian Council of Ceramic Tiles & Sanitaryware, New Delhi | 40. Madhya Pradesh Textile Mills Association, Indore |
| 34. J. Thomas & Company Limited, Calcutta | 41. PVC Resin Manufacturers' Association, Bombay |
| 35. Wimco Limited, New Delhi | 42. Flexible Packaging Association of India, New Delhi |
| 36. India Tobacco Company, Calcutta | 43. Indo Petro Chemicals, New Delhi |
| 37. Godfrey Phillips India Limited, New Delhi | 44. Elcina Electronics Component Industries Association, New Delhi |
| 38. Indian Petrochemicals Corporation Ltd, Baroda | 45. Semi-Conductor Panel Electronic Component, New Delhi |
| 39. Reliance Industries Limited, New Delhi | |



NOTES AND REFERENCES

1. The increase in the nominal rate of protection indicated above may be an over-estimate to some extent because tariff exemptions of various kinds were also growing. However, even on the basis of collection rate, the increase in the nominal rate of protection was by 50 percentage points.
2. Although the exchange rate depreciation has been computed since 1985-86, the rates of import duty were worked out only from 1986-87.
3. That is to say that to get the same landed cost as prevails today without any exchange rate depreciation, from 1986-87, the duty would have to be 330.5 per cent.
4. The international price of this commodity varied between \$450 and \$ 550 per tonne in 1986-87 and its current price is \$ 550 per tonne.
5. Unit value indices for exports by various import originating countries from the **International Financial Statistics** brought out by the International Monetary Fund, if used to measure foreign inflation, show that rupee depreciation in real terms has been much more than that obtained by using foreign producer/wholesale price indices. Conclusions drawn from the analysis would be strengthened if unit values were used.
6. Data on exchange rates (only buying rates are available for all the four foreign currencies) are taken from the **Reserve Bank of India Bulletin** (various issues). Figures as on the 30th June are taken. Data on the Indian Wholesale Price Index (1981-82 = 100) has also been taken from RBI Bulletins. End of period figures have been used. Data on foreign wholesale or, if unavailable, producer prices are from the **International Financial Statistics** (various issues), supplemented, for 1992-93 (upto June), with figures from the **Economist**.
7. These are taken from the **Economic Survey** (various issues).
8. Di-methyl teraphthalate/Pure terephthalic Acid.
9. Mono-ethylene glycol.
10. Import duty rates in respect of Mexico and Pakistan are for the year 1990 while in respect of Brazil, China and the Philippines, the rates are for the year 1992.
11. Further, as we have argued at length in our Final Report, Part I that there should be no domestic levy on inputs which does not earn Modvat credit.
12. Ashok Aggarwal, (1992), "Performance Variation across Industries: Role of Ownership, Trade and Market Structure", Ahmedabad (Doctoral dissertation, Indian Institute of Management).
13. The model we are suggesting would approximate "the income variant" of value added tax (VAT). Under "the consumption variant", the VAT paid on the capital good is given credit in the very same year, implying exemption of investment (saving).
- 14.. Government of India, Department of Electronics (DOE), **Annual Report**, 1991-92, p.7.
15. Ibid.
16. Ibid p.85.
17. DOE, **Guide to Electronics Industry in India**, (1992) p.1.8
18. Source: Government of India, **Receipts Budget**.

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| <p>19. According to an estimate appearing in Electronics Information and Planning, a DOE Journal, May-June 1990, p.311, the average indigenous components cost is Rs.180, if the international price is assumed as Rs. 100.</p> <p>20. Export and Import Policy : 1 April, 1992 - 31 March, 1997, Paragraph 156 (pp 58-59).</p> <p>21. In the case of copper, the duty is charged only on toll smelting charges freight and insurance. For goods cleared at the ICD's, the freight element between the gateway port and the ICD is not included in the assessable value.</p> <p>22. Notification No.72/86 dated 17.2.1986.</p> <p>23. Chapter 9 of the Interim Report and Chapter 4 of Final Report Part I.</p> | <p>24. Paragraph 9.2 of the Interim Report (p.108).</p> <p>25. Even today, this commodity is reserved for the small-scale sector.</p> <p>26. Paragraph 9.6 of the Interim Report (p.108).</p> <p>27. Paragraphs 9.6 and 9.7 of the Interim Report (p. 109).</p> <p>28. Paragraphs 9.52 and 9.53 (p.123).</p> <p>29. Paragraph 4.32 of the Final Report (Part I) (p.42).</p> <p>30. Paragraphs 4.48 to 4.54 of the Final Report (Part I) (p.45-46).</p> <p>31. Paragraphs 7.7 and 7.8 ibid (p.140).</p> |
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